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# A study of interorganizational relations between the Cooperative Extension Service and members of its organization set

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**A study of interorganizational relations between the Cooperative  
Extension Service and members of its organization set**

**by**

**Gary Lee Vacin**

**A Dissertation Submitted to the  
Graduate Faculty in Partial Fulfillment of  
The Requirements for the Degree of  
DOCTOR OF PHILOSOPHY**

**Department: Sociology and Anthropology  
Major: Rural Sociology**

**Approved:**

Signature was redacted for privacy.

**In Charge of Major Work**

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## CHAPTER 1. INTRODUCTION

More than ever before, society has come to be characterized by a proliferation and diversification of formal organizations. As Etzioni (1964:1) has pointed out, the major events in modern man's life are approved, recorded and take place within organizations:

We are born in organizations, educated by organizations and most of us spend much of our lives working for organizations. We spend much of our leisure time paying, playing and praying in organizations. Most of us will die in an organization, and when the time comes for burial, the largest organization of all -- the state -- must grant official permission.

Given this proliferation of organizations, it is not surprising that these phenomena have become a favorite topic of research for sociologists. Heydebrand (1971) maintains that empirical research on organizations has passed through two distinct phases and is presently entering a third one. Phase one, which occurred during the 1950's, emphasized exploration of organizational proto-types. Phase two, coinciding roughly with the 1960's, saw a shift in emphasis to concern for comparative and quantitative organizational analysis. Organizations were taken as the unit of analysis in many of these studies. Phase three is characterized by larger units of analysis and emphasis on the relationship between organizations in an organizational network or field, to use Warren's terminology (1967). This third phase of organizational research was actually spawned during the 1960's in the works of Levine and White (1961), Litwak and Hylton (1962) and others.

Many of the pioneering efforts in Phase three have centered on

organizations in the health and welfare field. Other studies have examined relations between agencies in the areas of civil defense and juvenile delinquency. Another empirical arena which appears to offer possibilities for interorganizational research consists of those agencies engaged in rural development activities. Many of these organizations, like those in the health and welfare field, may be considered as examples of Blau and Scott's (1962) "service organizations." The client group is the primary beneficiary in these agencies. Others are examples of "mutual benefit associations" where the prime beneficiary is the membership. One of these "service" organizations, the Cooperative Extension Service, has been of particular interest to the author for a number of years. The Extension Service has been involved in rural development programs and approaches for many years under a variety of county, state and federal program labels. The director of West Virginia Extension used the resource development concept as early as 1919 (Lind, 1967). The "Land Use and Planning" programs of the late 1930's and early 1940's were among the earliest efforts in this area. The mid 1950's saw the beginnings of the Rural Development Program on a pilot-county and area basis. Involvement in the Rural Area Development Program and Community Resource Development Program and establishment of Rural Development Committees are further evidence of Extension's commitment to helping people solve local, state and national problems. Despite historical roots in this area of programming, however, Extension is participating in a field which is very much occupied.

Warren (1968) has described the burgeoning field of community planning by comparing it to a crowded swimming pool. The individual planner is pictured as someone who wishes to dive into the pool at one end



and swim directly to the other side. But the pool is not empty. There are many others swimming underwater, jumping in or splashing around. As the planner swims along, he is clipped by one swimmer, collides with another, and is hit by another who has just done a beautiful swan dive from the top board. The implication for Extension is that in rural development it is only one of the swimmers in the crowded pool. Warren (1968:14) concludes that:

It is probably more important at this point in inter-organizational development to be aware of the whole pool, and the position and direction and speed of the various swimmers in it, rather than concentrating exclusively on doing one's own beautiful swan dive.

The whole pool consists of a proliferation and diversification of organizations--related and unrelated--operating at various territorial levels: neighborhood, city, county, multi-county, state and national. Hoiberg (1970) has noted that a growing emphasis on community development at colleges and universities throughout the nation has occurred during the 1960's. In addition, major emphasis on rural development has occurred: (a) in the federal government through the Office of Economic Opportunity's Community Action Agency Program, the Soil Conservation Service's Resource Conservation and Development Program; and the USDA's Technical Action Panels and Rural Development Committees; (b) in private enterprise where action programs such as the Northern Natural Gas Company's community development program and supportive programs such as the Sears-Roebuck Foundation and the Kellogg Foundation have been operating; and (c) in the state departments of planning and economic development, such as the Iowa State Development Commission and the Iowa Office of Planning and

Programming. In Nebraska, for example, Hoiberg (1970) points out that early efforts of the State Department of Economic Development were aimed at attracting industry into the state. However, these efforts presently are supplemented by the work of several specialists operating in the broader field of community development.

In short, rural development is bigger than Extension--or any one agency or single interest group. A large number of organizations, public and private, most of which operate in relative independence of each other, are engaged in development activities. Rural development means different things to different persons and organizations, but in general organizations tend to define the concept in terms of their own particular functions and services. What has emerged within the broad field of rural development, then, is an enormously complex array of specialized organizations, programs and services. A dilemma resulting from this situation is the difficulty in relating these services to each other in such a way that an effective attack can be made on significant problems. Whether these problems involve rehabilitation, poverty, unemployment, education or youth services, they usually transcend the services of any specific organization and demand cooperation and articulation of many services and the work of many agencies. Given these conditions, it is virtually impossible for any agency to achieve its own program objectives by itself. In order to succeed, it must relate its own programs to those of other agencies and organizations in the rural development field. In sum, performance of these agencies--both individually and acting in concert--is necessary for effective development efforts to occur.

Even though the Extension Service is only one swimmer in the crowded

pool, following from Warren, it has helped to bring about rural development through its influence on other agencies, groups and individuals. The Extension Service attempts to perform a catalytic function--causing action by bringing together the people who have problems and the resources that can help to solve these problems (Joint USDA-NASULGC Study Committee on Cooperative Extension, 1968). Many of Extension's greatest contributions have occurred through joint efforts with other agencies. One of its functions is to attempt to enhance relations between other organizations and agencies and to encourage individuals and organizations to use services available from action agencies. An often-heard complaint today involves the duplication of efforts as a result of the proliferation of organizations which characterize our modern society. Through its educational and organizational leadership, Extension seeks to bring the resources of other private groups and public agencies to the leadership of the community as they go about setting their goals or identifying their problems and developing solutions to them. Extension's ability to function, then, depends partially on other organizations and agencies with which it may cooperate in development programs.

In this study, interorganizational relations will be approached from the point of view of the Cooperative Extension Service. In Evan's terminology (Evan, 1966), Extension will be considered the focal organization. The organizations to which it relates in its environment will be referred to as the organization set. Major emphasis of this study is to be placed on tracing the interactions or exchanges between Extension and members of its organization set in an attempt to determine the extent of interaction and factors affecting the degree of interaction.

The rationale for this study, then, is both a practical and a theoretical one. From a theoretical standpoint, it must be recognized that the study of interorganizational relations is still in an early stage of development. It is hoped that this study will add to the growing body of theory being compiled in this area and that the concepts which have been found useful in other empirical arenas will also prove applicable to the study of interaction between organizations engaged in rural development activities. From a practical standpoint, it is hoped that it will provide insights that will help the practitioner predict which organizations Extension is likely to interact with and which factors are important in determining why this interaction may occur.

### Objectives

Formally stated, the objectives of this study are as follows:

1. To identify some of the organizations which constitute Extension's organization set.
2. To determine the level of interorganizational relations between Extension and members of its organization set.
3. To determine factors which are associated with interorganizational activity between Extension and members of its organization set.

## CHAPTER 2. THEORETICAL FORMULATIONS AND DEVELOPMENT OF HYPOTHESES

The purpose of this chapter is to develop a framework for the analysis of selected variables which are believed to be related to inter-organizational relationships and to derive hypotheses concerning the expected relation between these variables. The chapter begins with a discussion of several theoretical perspectives which have proven useful in studying interorganizational relations. Drawing on these works, a theoretical framework will be developed for the analysis of inter-organizational relations between the Cooperative Extension Service and organizations with which it interacts at the county level. The final section will consist of the derivation of a number of general hypotheses to be operationalized and tested in this thesis.

### Exchange Theory

One theoretical perspective that attempts to explain the extent of relations between organizations is exchange theory. Although social exchange has proven useful both to contemporary sociologists and social psychologists, Blau (1968) notes that social philosophers were perhaps the first to call attention to this perspective. Aristotle noted the role of reciprocal obligations in social exchange in his *Nicomachean Ethics* as early as the third century B.C. Anthropologists later utilized the exchange phenomenon in their discussion of the exchange of gifts and services in primitive societies. More recently, this perspective has been advocated by Homans, Blau and Thibaut and Kelley for analyzing interpersonal behavior. It has been applied to the study of interorganizational relations by Levine and White and others.

### Homans

Homans (1961:13) sees elementary social behavior " ... as an exchange of activity, tangible or intangible, and more or less rewarding or costly, between at least two persons." Elsewhere, (1958:606) he views dyadic relationships as " ... an exchange of goods, material and non-material." He sees non-material goods as including symbols of approval or prestige.

Schafer (1971) notes that Homans' exchange model may be conceptualized utilizing the concepts of costs, investments, profit and reward. Homans (1961:60) defines cost in economic terms as " ... the value of the reward obtainable through a unit of alternative activity, forgone in emitting the given one." Investments are those attributes actors bring to the exchange relationship and may include age, education, skill, knowledge, etc. Profit is defined as reward less cost. A reward is that which the individual receives for emitting a particular activity. In sum, individuals act so as to produce the greatest profit as measured against some standard of distributive justice. Distributive justice may be characterized as the process of fair exchange of rewards and costs. Two other major variables in Homans' system are value (degree of positive or negative reinforcement of an actor's activity) and quantity (the number of units of activity emitted within a period of time). Homans proposes that an actor would spend a greater quantity of time interacting with a second actor who performs activities that are highly valued than with a third actor who performs less highly valued activities.

Homans conceptualizes his model in terms of interpersonal exchange, but it would appear that the model may apply to interorganizational behavior as well. For example, organizations may expect to engage in a

"fair" exchange of resources through interorganizational activity. Each organization will expect that its rewards will be proportional to its costs--the greater the costs, the greater the rewards. An organization would be expected to interact more frequently with a second organization which performs activities which are more valuable to the first organization than with a third organization which performs activities which are less valuable.

### Thibaut and Kelley

The theories of Homans and Thibaut and Kelley are similar in that exchange between actors is conceptualized in terms of a behaviorist-economic model. Human behavior is seen as a function of the benefits received by an actor for participating in an exchange. Theories of these authors comprise a general reinforcement perspective. Thibaut and Kelley (1959) have proposed a theory to explain how two or more interacting persons depend on each other in order to attain positive outcomes. The authors assume that interaction will be repeated only if the interaction yields positive outcomes to the participants. A second assumption is that each participant attempts to maximize his positive outcomes in the interaction.

Like Homans, Thibaut and Kelley have produced an exchange theory based on the principles of reinforcement and maximization of profit. They were primarily concerned with the dyadic relationship and emphasize the rewards and costs that an individual realizes as a result of participating in such an interaction. Rewards are " ... the pleasures, satisfactions and gratifications that the person enjoys" (Thibaut and

Kelley, 1959:12). Costs are " ... any factors that operate to inhibit or deter the performance of a sequence of behavior" (Thibaut and Kelley, 1959:12). A third key concept, outcome, is considered to be the result of rewards received and the costs incurred. To Thibaut and Kelley, human behavior in an exchange situation is determined by individuals attempting to maximize their rewards while minimizing their costs. The individual's reward-cost position will be better, " ... (1) the more rewarding to the other is the behavior each can produce and (2) the lower the cost at which such behavior can be produced" (Thibaut and Kelley, 1959:31). Excellent reward-cost positions will accrue to each individual in a dyad if both produce the greatest rewards to the other at the smallest cost to themselves. If this occurs, both actors will be able to achieve a maximum reward-cost position simultaneously. Thus, the principles of maximization of profit and reinforcement form the major premise for their exchange model.

A major contribution of these authors to the exchange perspective is their discussion of evaluation of the alternative outcomes of the exchange process. Initially, neither actor in the dyad is aware of the outcomes he may experience as a result of the exchange. Thus, each samples the available outcomes and will continue the interaction only if he evaluates the experience as adequate. The authors introduce two concepts for use in evaluating the adequacy of the outcome: the comparison level (CL) and the comparison level for alternatives (CLalt). The CL is the standard by which an actor evaluates the attractiveness of a relationship in terms of what he feels he deserves. The CLalt is the " ... lowest level of outcomes a member will accept in light of available alternative opportunities" (Thibaut and Kelley, 1959:21). These concepts would appear to be useful



in analyzing interorganizational activity as well as human behavior. Any outcomes which fall above an organization's CL should be relatively attractive, while those dropping below the CL will be relatively unattractive. However, the organization may remain in the relationship if the outcome remains above the CL<sub>alt</sub>. If the outcome falls below the CL<sub>alt</sub>, the organization will leave the relationship and seek out an alternative. Just where these limits fall needs further explication in both interpersonal and interorganizational analysis, however, since there is no evidence to suggest cutting points.

### Blau

While Homans and Thibaut and Kelley have conceptualized exchange relationships in terms of a behavioristic-economic model based on the reinforcement principle, Blau's general framework of social exchange is based on a different set of premises. The basic assumption of his theory is that "Men seek to obtain rewards in their social interaction and continue interactions with others because they find them to be rewarding" (Blau, 1968:452). Blau further assumes that a person who receives benefits from his associates is expected to supply benefits to them when the occasion arises. Blau (1964:91) defines social exchange as "... voluntary actions of individuals that are motivated by returns they are expected to bring and typically in fact bring from others." He conceptualizes exchange as a process which rejects the reinforcement approach, instead stressing the emergent properties of social interaction. The starting point for his conceptualization is the social attraction an individual feels toward another because he expects the association to be

rewarding to himself. Once established through social attraction, the exchange relationship is maintained by the norm of reciprocity. Thus, an individual who receives benefits from his associates is obliged to reciprocate by providing benefits to them in turn. Blau (1968:565) maintains that while social interaction has important similarities with economic transactions, there are important differences between the two types of exchange.

The most basic difference is that the obligations incurred in social transactions are not clearly specified in advance. In economic transactions the exact obligations of both parties are simultaneously agreed upon; a given product is sold for a certain price.

Blau maintains that social exchanges are most likely to take the form of "favors" that create diffuse future obligations. Exact values may not be attached to particular exchange relations either by giver or receiver. Blau believes that this characteristic "diffuseness" or lack of specificity is the most crucial distinction between social exchange and strictly economic exchange.

Blau's discussion of social exchange based on the norm of reciprocity has provided a unique conceptualization of social power. Power originates when one individual gives more benefits than the recipient may repay. The recipient becomes indebted to the giver and expresses this indebtedness in the form of subordination. The recipient may invalidate the claim to power by returning benefits that adequately discharge the obligation, and may in fact make a counterclaim to superiority if his claims are excessive. Thus, Blau sees the recurrent unilateral supply of important benefits as a basic source of social power.

Blau's discussion of reciprocity is consistent with Miller's (1953) findings regarding the role of reciprocal obligations in community health activities. Miller notes that obligations owed to community influentials are a key factor in obtaining approval and support for a new hospital. According to this author (1953:142), obligation develops " ... where the value is held that acts of goodwill, friendliness and assistance place one in another's debt until they are repaid." Reciprocal obligations, as a factor in the decision-making process, may take two forms. The first consists of a diffused feeling of obligation by the community-at-large to a key influential who is working for the procurement of the hospital. Related to this is the obligation the key figure may feel to the community. The second form deals with the reciprocal obligations between the key figures themselves. Thus, the key participant may obtain the support of other key figures, or of the community-at-large, not because they necessarily believe the community needs a new hospital, but because they are obligated to the key participant for prior favors or support.

#### Levine and White

The approach of Levine and White (1961) to exchange theory differs from that of the previously discussed theorists in that the former have applied this perspective to the study of interorganizational relations. Levine and White (1961:588) define organizational exchange as " ... any voluntary activity between two organizations which has consequences, actual or anticipated, for the realization of their respective goals or objectives." This definition refers to activity in general, and not exclusively to reciprocal activity. Thus, the action may be unidirectional and still

involve exchange; e.g., providing information by one agency to another, or the referral of a client. However, Levine and White (1961:588) note that, "If an organization refers a patient to another organization which then treats him, an exchange has taken place if the respective objectives of the two organizations are furthered by the action."

Levine and White delineate four main dimensions to the actual exchange situation:

1. Characteristics of the parties to the exchange: e.g., function, prestige, personal characteristics, organizational affiliation, number and types of clients served.

2. Kinds and quantities exchanged. This dimension involves two classes: actual elements exchanged--e.g., consumers, labor services, and resources other than labor services; and information on the availability of these resources.

3. The nature of the agreement underlying the exchange. All exchange transactions are contingent upon a prior agreement, which may be implicit and informal or fairly explicit and highly formalized.

4. The direction and flow of the exchange. This may be unilateral if an organization receives nothing in return; reciprocal if one organization receives elements for those which it provides; or joint, where two organizations act in unison, providing resources to a third organization.

Levine and White see organizational exchange as cooperation. Organizations have need for three categories of elements: (1) cases, clients or patients; (2) labor services, including those of volunteer, clerical and professional personnel; (3) other resources, including funds, equipment, and information. The authors base their theory of why an

organization becomes involved in exchange relations with others on its need to obtain resources. Their view is similar to that of Aiken and Hage (1968), who see organizations "pushed" into interdependencies with other organizations because of a need for resources such as money, specialized skills, access to particular kinds of markets, etc. Few organizations have sufficient access to resources to enable them to fully attain their objectives. Thus, they must restrict their activities to limited specific functions. To fulfill these limited functions, an organization requires access to certain kinds of elements. To obtain these elements the organization may enter into exchanges with other organizations in the health system.

Theoretically, then, were all the essential elements in infinite supply there would be little need for organizational interaction and for subscription to cooperation as an ideal. Under actual conditions of scarcity, however, interorganizational exchanges are essential to goal attainment (Levine and White, 1961:587).

Levine and White posit several determinants of exchange. The accessibility of each organization to necessary elements from outside the system is one major condition of exchange. In their study of health agencies, the authors found that corporate organizations, those which delegate authority downward from a higher level, interact less with other local agencies than federated organizations, which delegate authority upwards from the local to a higher level. The reason is that corporate organizations are less dependent on the local health system because they are able to obtain necessary elements from parent organizations outside the community's system of health services. However, the authors note

that an organization's independence from the local health system and greater dependence on an extra-community system may result in disagreements with other agencies within the local system.

A second determinant of exchange is the organization's function. Certain organizations, such as those whose primary function is to educate the public about particular diseases, have functions that may be discharged more or less independently of other agencies. Other organizations, for example those giving X-ray examinations or polio immunizations, require frequent interactions with other organizations. In the same study, the authors found that agencies which provide a direct service to the public, provided more referrals than those which did not provide a direct public service function. This is apparently because organizations with direct service roles realize considerable organizational exchange around referral and treatment of patients. Another finding is that organizations rating high in prestige lead in the number of joint activities. Thus, the authors (1961:595) conclude that "Prestige, leadership and other organizational variables seem to affect interaction patterns within limits established by the function variable."

Another major condition for exchange, and one of strategic importance in this study, is domain consensus. The domain of organizations, according to Levine and White (1961:597) refers to

... the specific goals it wishes to pursue and the functions it undertakes in order to implement its goals. In operational terms, organizational domain in the health field refers to the claims that an organization stakes out for itself in terms of (1) disease covered, (2) population served, and (3) services rendered.

Domain consensus refers to interorganizational agreements concerning goals and functions. Without consensus on what roles are to be allocated to which organizations, the authors see competition, rather than cooperation, as the expected outcome. The role of domain consensus in explaining the extent of interorganizational relations between a focal organization and members of its organization set will be pointed out more specifically in the conceptualization of specific variables in this study.

Although their exchange theory perspective has been a significant contribution to the study of interorganizational relations, the approach of Levine and White is limited to "voluntary activity" and would be inappropriate in those situations where organizations are directed to interact by a higher administrative level. As these authors have noted, their work also is limited by not describing how the larger systems are intertwined with the health agency system.

#### Other works utilizing the exchange theory perspective

Another work which may be subsumed under the exchange theory perspective is that of Aiken and Hage (1968). These authors investigated the relationship between organizational interdependence and internal organizational behavior of sixteen health and welfare organizations. That aspect of organizational interdependence considered in this study was the joint cooperative program with other organizations. Their approach is similar to that of Levine and White in that they assume that organizations are "pushed" into interdependencies with other organizations because of a need for resources, " ... not only money, but also resources such as specialized skills, access to particular kinds of markets and the like" (1968:914).

Aiken and Hage assume the internal organizational diversity stimulates organizational innovation, which in turn increases the need for resources. As this need intensifies, organizations develop joint programs with other organizations in order to gain resources. Another assumption is that organizations attempt to maximize gains and minimize losses in attempting to obtain resources. Thus, the elements received through the interaction must be of sufficient benefit to offset the costs of creating interdependencies if the relationship is to continue. The authors found that organizations with many joint programs tend to be more innovative and complex, and are characterized by more active internal communications channels and somewhat more decentralized decision-making structures.

Dillman (1969) has pointed out that the greatest limitation of this study was the use of "number of joint programs" as an indicator of organizational interdependence. For example, organizations may engage in joint programs, as a result of administrative directives from above, as in the case of the federal agencies involved in Rural Development Committees, whether these organizations are interdependent or not. Also, organizations may not perceive they are involved in joint programs, even though they are interdependent through exchanges of resources.

Reid's suggestion (1964) that complementary resources are an important factor in understanding interorganizational relations would appear to be consistent with the exchange perspective. He points out that complementary resources may be lacking for several reasons. For example, organizations' goals may be uniquely shaped to their resources, leading to self-sufficiency. Reid believes this condition characterizes many psychological treatment agencies. Another form of self-sufficiency may occur in



organizations large enough to include specialized personnel or departments which provide the necessary resources. In other cases, organizations may have similar goals, but not enough resources to achieve them.

Litwak and Hylton (1962) view cooperation as one of several kinds of "linkages" in their study of the relationships among organizations engaged in partial conflict. They hypothesize (1962:400) that coordinating agencies will develop and continue to operate " ... if formal organizations are partly interdependent; agencies are aware of this interdependence; and it can be defined in standardized units of action." These authors define interdependence as the situation where organizations must take each other into account in order to accomplish their goals. Partial interdependence is the optimum state for cooperation because total cooperation would lead to a merger. Awareness means that agencies recognize that a state of interdependence exists. Standardized transactions may be viewed along a continuum of standardization with formal rules, such as written agreements at one end, and relatively unstandardized events, such as an ad-hoc conference, at the other.

As Rogers (1971) has noted, a major limitation of the Litwak and Hylton model is that it is based on a condition of unstructured authority or an absence of formal authority which can impose cooperation. Although this model may be useful in analyzing a number of different situations, its application is limited in those situations where agencies are ordered to coordinate their activities by a higher authority level.

Klonglan et al. (1969) utilized an exchange theory framework to explain the transactions among local agencies of the Iowa Comprehensive Alcoholism Project (ICAP) and other community "helping" agencies with

programs relevant to alcoholism. It was hypothesized that the intensity of the ICAP's transactions with other agencies is a function of three sets of factors: preconditional variables, those conditions existing prior to any interaction and independent of the other agency in the interaction situation; interagency conditional variables, conditions that depend upon the existence of the potential partner for the interaction; and impact variables, changes in the structure and/or functions of the agency partially due to interaction activities and/or interagency conditional variables. This study is limited in that final assessment of agency cooperative relations was made after the ICAP service center had been in operation for only one year. This resulted in difficulties in measuring the impact of other "helping" agencies. The findings reported were limited to two variable relationships. Emphasis on multivariate relationships is needed to further advance the study of interorganizational relations.

Dillman (1969) conducted multiple variable analyses on data from the Klonglan et al. study, exploring the ability of selected combinations of independent variables to account for the extent of interorganizational relations between the ICAP service centers and members of their organization sets. Three structural variables--size of resource base, systemic relatedness of external control structures, and complementarity of focal organization needs with set organization goals--accounted for 59 percent of the variation in the dependent variable.

In summary, the exchange perspective has been utilized by several sociologists who have investigated interorganizational relations. A major advantage of this perspective is its pervasiveness. Blau (1968:453) has

pointed out that social exchange is ubiquitous: "Neighbors exchange help with chores; discussants, ideas; children, toys; friends, social support; politicians, concessions." Groups and organized collectivities, too, are engaged in social exchange, as noted by Levine and White (1961), Klonglan et al. (1969) and Dillman (1969). These authors have found the exchange perspective useful in studying the relations among organizations in the health and welfare field. In view of its pervasiveness, it would seem that this perspective would also prove useful in examining the interaction among organizations engaged in other empirical arenas as well.

However, the pervasiveness of social exchange may also be considered a disadvantage. Blau (1968) admits a temptation to attempt to apply the notion of social exchange to all behavior in interpersonal relations. However, he notes that the concept becomes tautological if all forms of social conduct are subsumed under it. For example, idealistically-oriented behavior such as what a father normally does for a young son might not profitably be examined from an exchange point of view. Nor may cases of "physical coercion" such as a person being confronted by an armed holdup man. Blau also excludes conformity with internalized norms from what is meant by exchange, for example the actions of a man who donates to charity because his conscience demands that he help the poor but expects no gratitude from them in return.

### Set Theory

Set theory may best be considered as a sub-theory which provides a conceptual handle for dealing with interaction between organizations. This approach was conceptualized by Evan (1966) and has been utilized by

Klonglan et al. (1969) and Dillman (1969). Two concepts which are central to a discussion of set theory are organization set and focal organization. As used by Evan (1966), the organization of primary interest may be referred to as the focal organization, with the organizations to which it relates in its environment being referred to as the organization set. The concept of organization set is analogous to the concept of role set used by Merton (1957) to analyze role relationships. A role set consists of the complex of roles and role relationships that the occupant of a given status possesses by virtue of occupying that status. Merton (1957: 369) differentiates role set from the structural pattern known as multiple roles. The latter concept refers to:

... the complex of roles associated, not with a single social status, but with various statuses (often, in differing institutional spheres) in which individuals find themselves--the roles, for example, connected with the distinct statuses of teacher, wife, mother, Catholic, Republican, and so on.

This complement of social statuses of an individual is designated as his status set. Each status has its distinctive role set. Role set and status set are structural concepts, referring to parts of the social structure at a particular time.

The similarity of Evan's "organization set" and Merton's "role set" is evident. Where Merton takes a particular status as the unit of analysis, Evan takes as his unit of analysis an organization or a class of organizations, tracing its interactions with the network of other organizations in its environment. Evan's use of the concept is similar to that of Blau and Scott, but differs from that of Caplow. Blau and Scott (1962:195)

speak of organization sets or webs of organizations, " ... thus referring to the various other organizations to which any one organization is related." Caplow (1964:201) has defined organization set as " ... two or more organizations of the same type, each of which is continuously visible to every other." To Caplow (1964:201), an organization set consists of such organizations as, " ... the sociology departments of major universities . . . the teen-agers' clubs at a settlement house . . . or the leading manufacturers of electrical equipment." He notes (p. 201) that an organization set may be identified by

... the presence of a prestige order that is recognized by most participants, the interchangeability of some personnel, and the engagement of each organization in some important activities common to all members of the set.

The essential function of Caplow's organization set is comparison, and he maintains that every organization set generates a prestige order which is recognized by participants and outsiders as well.

Caplow (1964:223) notes that his conception of organization set differs from that used by Blau and Scott in that the latter " ... are not discrete entities, their boundaries are nebulous, and they do not have well-developed prestige orders." He points out that the key words in his definition are "of the same type." Thus, the concept of organization set as defined by Caplow is unacceptable for analyzing interorganizational relationships in the manner done in this study. This study is concerned with functional exchanges which occur between an organization and its environment. Klonglan et al. (1969:57) point out that

While, for example, the leading manufacturers of electrical equipment are very likely to use each other as referents, the input-output exchange so necessary for their survival are much less likely to be with each other than with organizations not having the same or similar functions.

Although exchanges do occur between organizations which have the same functions, a great number of exchanges occur between a focal organization and other types of organizations with which it may interact.

The concepts of organization set and focal organization have seen little use in empirical research. However, Evan (1966:178) suggests that analyzing the organization set of a focal organization could help explain

... (a) the internal structure of the focal organization; (b) its degree of autonomy in decision-making; (c) its degree of effectiveness or "goal attainment;" (d) its identity, i.e., its public image and self-image; (e) the flow of information from the focal organization to the elements of its organization set and vice versa; (f) the flow of personnel from the focal organization to the elements of its organization-set and vice versa; (g) the forces impelling the focal organization to cooperate or compete with elements of its organization-set, to coordinate its activities, to merge with other organizations, or to dissolve.

Evan (1966) has delineated several dimensions of organization sets: (1) input vs. output organization sets; (2) comparative vs. normative reference organizations; (3) size of the organization set; (4) concentration of input organizational resources; (5) overlap in membership; (6) overlap in goals and values; (7) boundary personnel. Dimension No. 1 appears to be most applicable to the present study. A focal organization's environment consists of an input organization set and an output organization

set. A focal organization relies on input organizations for such resources as funds, equipment, personnel, legitimacy, etc. Utilizing these inputs, the focal organization in turn produces a product or a service for a market, an audience, a client system, etc.

In sum, Evan has extended Merton's concept of role-set to the analysis of interorganizational phenomena. Within this framework, one may consider the role sets of so-called "boundary personnel" within organizations--those actors who interact frequently with staff members from other organizations. Thus, as Reid (1970) has suggested, one may conceive of interorganizational relations as transactions occurring within role sets of boundary personnel. The notion of role set is extended to organizational analysis through the concept of organization set. Utilizing this concept, one may analyze the relationship between a focal organization and other organizations which constitute its set.

### Field Theory

Field theory, as applied to the study of interorganizational relations by Warren (1967), appears to be somewhat related to set theory. While set theory considers the relationship between the focal organization and organizations in the environment which make up its organization set, field theory considers the behavior of the organization as a function of the situation as a whole as it exists at the moment for the organization. Thus, both perspectives place emphasis on the organizational environment in understanding interagency relationships.

Warren (1967) views interorganizational behavior in the context of an interorganizational field within which specific interactions occur. By

field he means the network of relations within which organizations operate. Warren bases this concept on the observation that interagency interaction is partially a function of the nature of the organizational pattern within which the organizations find themselves. He maintains (1967:397) that

... interaction between two department stores of a given size will be somewhat different if they are the only two in a medium-sized city from what it would be if they constituted two out of 20 different department stores of approximately the same size in a metropolis.

He postulates that interorganizational relations may occur on a continuum of local control and local concern, varying from a "social choice" context through the "coalitional" and the "federative" to the "unitary" context. These types vary as to the structure of the context within which interorganizational relations occur, from a nonexistent structure at one extreme (social choice) to a tightly integrated one at the other (unitary). These types, which might be considered "ideal types" in the Weberian sense, vary along six organizational dimensions: (1) the relation of organizational units to an inclusive goal; (2) locus of inclusive decision-making; (3) locus of authority; (4) structural provision for division of labor; (5) commitment to a leadership subsystem; and (6) prescribed collectivity-orientation of the organizational units. These six dimensions range from close to zero at the social choice context, through coalitional and federative to unitary, where each has the greatest magnitude. A social choice context is characterized by interorganizational relations which are highly decentralized. Interacting organizations retain their autonomy and are not committed to a more inclusive coordinating unit. Organizations may voluntarily enter into a coalition characterized by



little permanent structure and little sense of commitment to a higher unit. Autonomy is retained, and organizations act in a concert only to the extent that they perceive such behavior as maintaining their domains. The federation is characterized by partial concerting of action through ad hoc interaction and formulation of a special coordinating organization. In the unitary context, interorganizational relations are highly centralized, controlled from above by a single hierarchical structure which orders interaction among units which display high collectivity orientation. Warren (1969:10) notes that organizations do not in reality always fall neatly into one of these contexts, but that they "represent merely points on the continuum of each of the six dimensions listed."

Warren's typology of organizational types appears to be a useful tool in understanding the unique characteristics of organizations involved in development activities. Cummings (1970) utilized the typology in a survey of 229 Extension workers in community resource development, and found that forty percent characterized community development activities in the geographical areas in which they worked within the coalitional context, twenty-nine percent in the federative context, eighteen percent in the unitary context, and thirteen percent in the social choice context.

### Input-Output Analysis

Most conceptualizations of interorganizational relations as exchange transactions implicitly or explicitly include the assumption of organizations involved in input-output processes. This assumption underlies the work of Evan (1966), Thompson (1967), Klonglan et al. (1969) and Dillman (1969). Organizations are conceived as dependent on their environment

for inputs or resources which they in turn convert into outputs. The work of Parsons (1968:460) who has not been interested in interorganizational relations per se, also is based on this premise: "A social system, like all living systems, is inherently an open system engaged in processes of interchange (or input-output relations) with its environment." Levine and White (1961) view organizations as involved in exchanging inputs for other inputs. They note that few health agencies have access to all the necessary resources--cases, labor services and other resources--in order to carry out their functions. Thus, these agencies must turn to other agencies to obtain needed elements. For example, the authors (1961:587) note that the need for a sufficient number of clients " ... is often more efficiently met through exchanges with other organizations than through independent case-finding procedures."

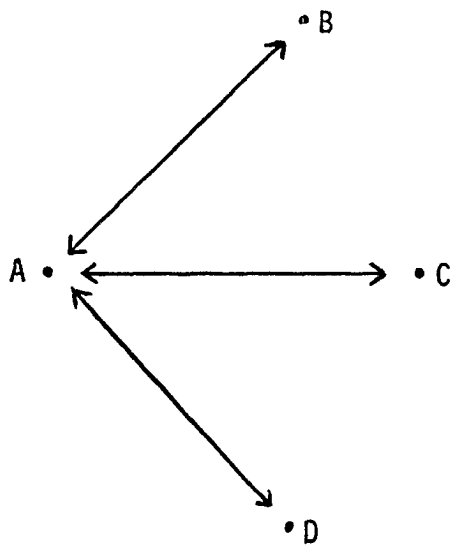
Klonglan et al. (1969) maintain that the conception of organizations as relying on input-output processes for the realization of goal attainment underlies the analysis of interorganizational relations as exchange processes. In order to achieve their goals, organizations require inputs (or resources) which they convert into outputs. Dillman (1969) conceptualized exchange relations as adaptive transactions following Parsons' schema of system problems which must be solved if the system is to maintain its equilibrium. Adaptive transactions were defined as interactions between a focal organization (local ICAP service centers) and its set of organizations in which something changes hands, with the result being instrumental to goal attainment. Adaptive transactions made to acquire inputs or resources perceived as necessary for an organization's functioning were of central interest in the study.

Evan (1966) has suggested that the Leontief input-output model may prove useful in analyzing interagency relations. Noting that this model has been concerned with economic parameters such as prices, investments and incomes, he considers its applicability to noneconomic parameters of interorganizational relations with which sociologists have been concerned. He is particularly concerned with the level of measurement, noting that data that economists work with take the form of ratio scales, while social scientists dealing with organizations must contend themselves with nominal, ordinal and occasionally interval scales.

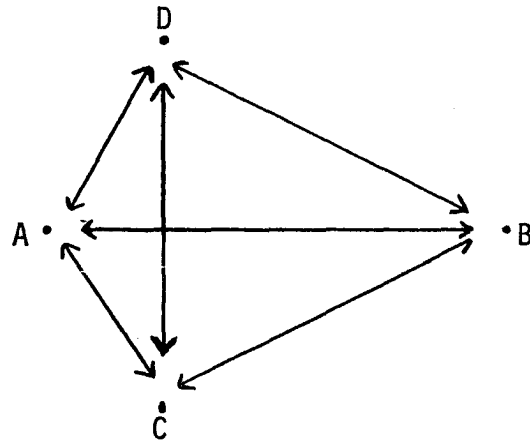
### Graph Theory

Evan (1966) has suggested that graph theory may prove useful in measuring the amount of decision-making autonomy of a focal organization and members of its organization set. His simplified configurations approximating a wheel, a chain, and an all-inclusive network appear in Figure 2.1. Each point represents an organization and each line a type of interaction, with arrows indicating direction of interaction. Designating A as the focal organization in each configuration, Evan expects that  $I_A$  ranks first in decision-making autonomy, followed by  $II_A$  and  $III_A$ . He suggests that the supplier in the automobile industry is in a position similar to  $III_A$  and the manufacturers can be approximated by position  $I_A$ .

A different utilization of graph theory appears in the work of Young and Larson (1965), who apply an interorganizational relations perspective to the study of the community. These authors describe a central New York community in terms of subcommunities made up of interacting voluntary associations. Interaction was conceptualized in terms of overlapping



1. Wheel



11. All-channel network



111. Chain

Figure 2.1. Organization set configurations

memberships, with two organizations being considered overlapped if the larger contained at least 25 percent of the members of the smaller. Utilizing a matrix approach based on membership in organizations, Young and Larson (1965:928) found that the community is subdivided "along lines of structurally channeled interpersonal interaction, into units within which there are many connections and among which there are few." With the exception of two groups of women's organizations, little interaction was found to occur among subcommunity groups.

In view of these works, it would appear that graph theory makes its

greatest contribution not as a theoretical perspective, but as a methodological tool for mapping interorganizational relations.

### Conflict Theory

A situation of conflict exists between organizations when the activities of one interfere with those of another (Guetzkow, 1966). The work of Litwak and Hylton provides a logical takeoff point for a discussion of the role of conflict in interorganizational relations. These authors assume conflict between organizations as a given in interorganizational analysis. Elimination of conflict is seen as a deviant instance, one which may lead to disruption of interorganizational relations, through mergers, for example. Intraorganizational relations, on the other hand, are premised on the assumption that conflicting values result in a breakdown of the organization's structure. Even though organizations may be engaged in cooperative activities, conflict is permitted and even encouraged in interorganizational relations in the form of conflict values as reflected in organizational goals. In short, a situation of partial conflict must exist in all societies because of a lack of resources for maximizing all values simultaneously. Thus, a choice must be made among these values, even though they may be quite consistent.

Warren (1969) focuses on concerted decision-making, and has suggested that organizations may engage in this type of relationship even in those instances where their interests on the issues involved are opposed to each other. Concerted decision-making is possible where the organization's interests do not coincide, and even where they are in direct conflict. In these cases, a different outcome for the specific issue is sought by

parties involved. Warren notes that the organizations involved may negotiate with each other or may seek a third organization to act as mediator or arbitrator. If the issue involves units within a formal organizational hierarchy, a unit or official in a superordinate position may act as the third party, as where a general manager resolves a dispute between two of his department heads. The latter situation would be an example of Warren's unitary context of decision-making.

Although Barth (1963) does not relate conflict to interorganizational relations per se, his work will be reviewed because it identifies factors which concern for cooperative relations would have to consider. This author examined the causes and consequences of conflict existing between agencies attempting to improve the status of minority groups. Conditions characterizing the agency structure of most communities which generate conflict between organizations are identified:

... (1) the existence of several (two or more) relatively autonomous agencies working in the same general sphere; (2) the differentiation of such agencies on the basis of philosophy and goals of intergroup relations as well as on the basis of the special skills of agency personnel; (3) the organization of the agencies on a bureaucratic basis ...; (4) interagency competition for both financial and public support (p. 55).

Barth concludes that conflict may alienate support for intergroup relations programs. Another consequence is that agency personnel are constantly attempting to demonstrate their agency's effectiveness to their supporters, thus neglecting the stated goals of their agency. Although interorganizational conflict may result in these damaging short-run consequences, Barth (1963:57) believes the net balance of consequences in

the long run to be positive: "A diverse set of intergroup relations skills are maintained; flexibility of program is possible; and the community's ability to meet new and changing intergroup problems is maximized." Thus, he appears to agree with Coser (1956) that conflict may be functional for a community.

Reid (1969) defines organizational conflict as a situation where one or more organizations achieve their goals at the expense of the goals of other organizations. Even though conflict may constrain interagency exchange, Reid maintains that its presence may offer some potential for such exchange, depending on the nature of the conflict. Three types of interorganizational conflict are delineated, those involving the input, exchange, and output of the resources involved. Conflict may center around the input of resources when organizations compete for the same scarce resources. The prior nature of interorganizational relationships will determine how this type of conflict will affect coordination. It may constrain the relationship if it emerges in situations where a state of interdependence exists between the organizations involved. If it emerges in the context of independent organizations, it may result in interdependence and exchange.

Conflicts involving the exchange of resources " ... occur over such questions as which organization shall contribute what or how much in joint undertakings" (Reid, 1969:182). Conflicts of this type may occur only where the organizations are contemplating or are actually engaged in exchange and may serve to constrain the exchanges. This type of conflict may be resolved if the agencies can reach an acceptable agreement in the give-and-take of resources. The solution may be permanent if the

organizations adhere to the bargain. Conflict over output of organizational resources concerns one organization's legitimation of another's outputs in relationship to its own goals. Conflict may occur when an organization decides its goals "are being undone" by another organization's outputs. While the first two types of conflict center on resources actually exchanged, this type occurs in respect to how an organization evaluates these resources. Reid notes that conflict regarding the output of resources generally constrains or blocks interorganizational exchange. He maintains that this situation is similar to Levine and White's statement regarding organizational legitimation of each other's goals and methods as means of achieving domain consensus.

Although conflict theory may prove useful in understanding interorganizational relations at a theoretical level, it would appear to be somewhat limited at the empirical level, because of the reluctance of respondents to reveal and discuss areas of conflict between their organizations. In general, conflict theory in sociology has been characterized by methodological weaknesses, and these weaknesses are apparent in the conflict theory approach to interorganizational relations.

### Social Systems Theory

If organizations are conceptualized as social systems, then the concept of linkages becomes extremely helpful in the study of interagency relations. This notion of intersystem relationships has been recognized either implicitly or explicitly by a number of sociologists. However, the work of Charles P. Loomis (1960) shows perhaps the greatest concern for the notion of linkages. Loomis has delineated a set of correlated



concepts for the investigation of social systems. His conceptual scheme includes elements and elemental processes; comprehensive or master processes; and conditions of social action. Of primary interest to the study of interagency relations is his comprehensive or master process of systemic linkage (1960:31-32) which may be defined as

... the process whereby one or more of the elements of at least two social systems is articulated in such a manner that the two systems in some ways and on some occasions may be viewed as a single unit. The convergence of ends is common in systemic linkage, but norms, sentiments, status-roles and other elements may be involved ... without systemic linkage an unthinkable parochialism would deny to groups any form of contact outside their own boundaries.

Another of Loomis' master processes which may be considered as an opposite of systemic linkage is boundary maintenance, or " ... the process whereby the identity of the social system is preserved and the characteristic interaction pattern maintained" (p. 31). Without boundary maintenance, Loomis maintains that it would be impossible to distinguish social groups among a mass of individuals and interaction would be haphazard. He points out that systemic linkage and boundary maintenance are not necessarily antagonistic forces, and that organizations may display both processes simultaneously.

The social systems approach makes a significant contribution to the understanding of interorganizational relations through the notion of interdependency of systems and the concepts of systemic linkage and boundary maintenance. One may view the relationships between agencies as system linkages mediated through individuals in status-roles who

function as links between the social systems involved in the interaction. These individuals also may serve in a boundary maintenance capacity when the social system is threatened.

### Limitations of Past Research

The preceding section has examined several theoretical perspectives which have been used to guide research on interorganizational relations. Also reviewed were several empirical studies of why organizations enter into relationships with each other. These works represent some of the most significant efforts to fill the near void in applicable research in this area which had existed prior to 1960. These studies form the basis of a small but growing body of theory on the nature and dynamics of interorganizational relations. However, additional theoretical inputs are still needed in this area. No all-encompassing theory of interorganizational behavior has evolved as of yet. In the words of Bellin (1970:103), " ... we shall have to be content with a bagful of theories to account for the phenomena we observe." As Dillman (1969) has noted, approaches to the study of this phenomena consist of only partial conceptualizations. Many of these efforts which focus on only limited aspects of interorganizational relations have not been related to the larger body of sociological theory.

Most of the past studies of interagency relations deal with organizations which cooperate on a voluntary basis (Rogers, 1971). More attention should be given to agencies which cooperate because they are directed to do so by a higher administrative level. Attention in these situations may be focused not on each agency's own limited aims, but on a goal which

is larger than the effort of any one organization. Many past studies have focused on a narrow problem area, such as health, welfare or alcohol. Others have concerned only a single organization and its relevant field. There is a need for more research on organizations from diverse empirical arenas. For example, is the nature of cooperation among health and welfare agencies sufficiently distinct to warrant a separate theory to describe it, or will the models which apply to these organizations also account for the behavior of agencies involved in other fields, such as rural development, for example?

While there is a need for more theorizing in the area of inter-organizational relations, the need is even greater for empirical tests of existing theories and models. Much of the literature consists of theoretical formulations based on illustrative data. Only by submitting these theories to an empirical test can the study of interagency relations be scientifically advanced. Related to this is the need for comparative studies of diverse organizations in different geographical settings. As Rogers has pointed out (1971), comparative data are needed to allow for the development of empirical generalizations about interorganizational relations.

Hall and Clark (1969) have commented on the shortage of "methodological sophistication" in interorganizational analysis. A limitation of the majority of empirical studies in this area is their preoccupation with two-variable relationships. This situation may be explained by the fact that empirical investigation of interorganizational relations is still in a period of early development. The study of interaction between organizations has attracted the attention of sociologists only in the last ten

years. However, as the body of theory on interorganizational behavior continues to grow, attention must be focused on the multivariate relationships. Also needed are more sophisticated measures of interorganizational relations. More work needs to be done in the development of scales and other measures. The literature review revealed only two attempts to formulate deterministic measures--Finley (1970) and Klonglan et al. (1972). Research is needed on the deterministic idea of interorganizational relations, aimed at developing multiple-item cumulative measures.

#### Development of a Theoretical Perspective

Discussion to this point has focused on alternative theoretical perspectives which have been used to guide research on interorganizational relations. Drawing on these prior works, a theoretical framework will be developed in this section for the analysis of interorganizational relations between the Cooperative Extension Service and organizations with which it interacts at the county level. Exchange theory supplemented by set theory and input-output analysis will be incorporated into this theoretical perspective.

The organization of primary concern in this study is the Cooperative Extension Service. The Extension Service will be considered as the focal organization following Evan's terminology, and the organizations to which it relates in its environment will be referred to as components of Extension's organization set. Interaction between the Cooperative Extension Service and members of its organization set may be defined as a system of exchanges. In the process of interaction, organizations are essentially engaged in the exchange of resources for the purpose of goal attainment.

Resources are assumed to be scarce commodities, and few if any organizations possess or control the entire complement of resources necessary to achieve their goals. Funds, facilities, personnel, and other resources are lacking in some measure. In these situations, Extension may elect to enter into exchanges with set organizations in order to acquire the necessary resources. Either Extension or the set organizations may initiate the interaction. What is involved, then, is the exchange of inputs between the Extension Service and relevant members of its organization set. Following from Homans (1958), these organizations expect to engage in a fair exchange of resources through interorganizational activity. The rule of distributive justice holds in that each organization will expect that its rewards will be proportional to its costs--the greater the costs, the greater the rewards. The Extension Service would be expected to interact more frequently with a second organization whose activities are more valuable to Extension--the Soil Conservation Service, for example--than with a third organization which performs activities which are less valuable, such as a ministerial association.

Obtaining resources from set organizations is subject to the norms of reciprocity as suggested by Blau (1968). Thus, if Extension receives certain inputs from the Soil Conservation Service, for example, Extension is expected to give something in return. What resources are given in return and when the reciprocal transfer is to be made are not specified. It is at this point that differences between social exchange of the type being examined in this study and economic exchange are clearly differentiated along the lines suggested by Blau (1968). Social exchanges generally take the form of "favors" that create diffuse future obligations,

in which neither giver nor receiver attach exact values to the exchange relation. In contrast, the benefits involved in economic exchanges may have an exact price in terms of a single quantitative medium of exchange, such as dollars.

Discharging reciprocal obligations involves a cost for organizations participating in interorganizational relations. If Extension and the Soil Conservation Service exchange resources, neither organization may place a value on the resources involved in the exchange. Either organization may consider the act of providing resources as a cost, however, in that the exchange involves the expenditure of time by staff members of each organization, and time is a scarce resource which either organization could use in alternative ways to further its goals. Cost could also be involved when Extension provides resources to the Soil Conservation Service, for example, when these same resources could conceivably be loaned to another organization such as an industrial development corporation. However, organizations attempt to reach a satisfactory balance in exchange relationships with other organizations over time. For example, Extension may go out of its way to provide resources to a set organization if the county Extension director feels that such action is necessary to provide a satisfactory balance with that organization.

Conceptualization of interorganizational relations as exchange transactions in this study is based on the assumption of organizations involved in input-out processes. Organizations rely on the operation of input-output processes for the realization of goal attainment. In order to achieve their goals, organizations require inputs (or resources) which they convert into outputs. Applied to the present study, this idea may be

stated as follows. The county Extension office requires certain inputs in order to function: cooperators, both rural and nonrural; financial resources; staff skills; and time. The anticipated outputs of the Extension office are educational programs which hopefully result in higher incomes for cooperators and a better community in which citizens may live. Evan (1966) notes that a focal organization's environment consists of an input organization set and an output organization set. All of the agencies which constitute Extension's organization set in this study could be considered input organizations. For example, it is conceivable that Extension might obtain a meeting room from the Soil Conservation Service, mailing lists from the Farmers Home Administration, aerial photographs from the Agricultural Stabilization and Conservation Service, or a grant from a bankers association to help finance the 4-H awards program. Uses of these inputs would allow Extension to produce an output for its client systems. If we define Extension's primary output as education, one can visualize Extension conducting an educational meeting for a zoning commission on the economic impact of converting farm land into sites for commercial development; for a county conservation board on the habitat of various species of wildlife; or for a ministerial association on the social action process. Thus, some of the set organizations in this study also could be considered as output organizations for Extension.

#### Interorganizational Relations as Interaction

Dillman (1969) has noted that interagency relations may be conceptualized at a very general level as interaction between organizations. Social interaction denotes the reciprocal influencing of the acts of persons

and groups, usually mediated through communication. Viewed in these terms, interaction may be dealt with in terms of interorganizational phenomena as well as interpersonal relations. Thus, interorganizational interaction consists of an action of one organization evoking a response from a second organization, with this response in turn having an effect on the first organization.

Several sociologists have offered schemes for delineating the types of relationships between organizations. Aiken and Hage (1968) point out that the study of interorganizational behavior may incorporate the processes of both conflict and cooperation. Hall and Clark (1969) refer to a facilitative-conflictive continuum for the placement of interagency relationships. Thompson and McEwen (1958) dichotomize organizational relations into cooperation and competition. Leadley (1969) maintains that interorganizational relations may be described in terms of cooperation-conflict. These sociologists appear to be in general agreement that organizational interaction may be viewed as conflictive-competitive and cooperative actions. Thompson and McEwen (1958) define competition as a form of rivalry between organizations which is mediated by a third party. They delineate three sub-types of the cooperative strategy--cooptation, coalition and bargaining. Cooptation refers to " ... the process of absorbing new elements into the leadership or policy-determining structure of an organization as a means of averting threats to its stability or existence." For example, representatives of banks or other financial institutions may be placed on the board of directors of corporations which have large financial obligations or may want to insure access to financial resources. Coalition refers to " ... a combination of two or more



organizations for a common purpose." Coalitions are frequently formed between organizations which choose to pursue goals calling for more resources than any one of them has access to. Bargaining refers to " ... the negotiation of an agreement for the exchange of goods or services between two or more organizations." Thompson and McEwen offer collective bargaining between labor and industrial management as an example of bargaining, but point out that this concept occurs in other areas of organizational endeavor.

Thompson and McEwen's concepts of bargaining, coalition and cooptation may be seen as forms of exchange between organizations, with various degrees of control over the first organization's decision-making being exchanged for support from the second organization. The three concepts may be placed on a continuum ranging from bargaining, where the smallest degree of control over the organization's decision-making is sacrificed, through cooptation to coalition, where the greatest degree of control is sacrificed through a merger of organizations.

Although bargaining, cooptation and coalition, as used by Thompson and McEwen, may be seen as forms of social exchange, the relationship of these concepts to conflict and competition also must be considered. Before proceeding, however, conflict must be distinguished from competition. Young (1949) notes that these concepts may be considered forms of opposition, with conflict being the more violent form, in which emphasis is placed on the opponent, rather than the reward. Dillman (1969:20) makes a similar distinction, noting that "When the rules of competition break down, conflict is the result." Lowry and Rankin (1969) maintain that social groups as total entities may interact in a cooperating or conflicting

manner, and that competition represents a combination of these two forms of interaction.

Several sociologists have noted the intertwining of conflict, competition and cooperation in a single interaction encounter (Cooley, 1918), (Litwak and Hylton, 1962), (Davis, 1949). The work of Litwak and Hylton appears to be most significant for the present study. These authors (1962:397) see conflict as given in interorganizational analysis, which " ... starts out with the assumption that there is a situation of partial conflict and investigates the forms of social interaction designed for interaction under such conditions." Cooley (1918:39) maintains that " ... conflict and cooperation are not separate things but phases of one process which always involves something of both." Coser (1968:236) appears to share these sentiments when he discourages against sharply distinguishing a sociology of order from a sociology of conflict:

We deal here not with distinct realities, but only with differing aspects of the same reality, so that exclusive emphasis on one or the other is likely to lead the analyst astray.

Klonglan et al. (1969) note that Litwak and Hylton's reference to partial conflict may be interpreted, not in terms of open hostilities between organizations, but rather as conflicting values as reflected in organizational goals. This situation of conflicting values might result in conflict regarding the acquisition of resources. Organizations arise as means of achieving goals which derive from conflicting values. These organizations compete for scarce resources in order to achieve their respective goals. The exchange process may be seen as a means whereby

organizations acquire resources necessary for goal attainment. Thus, the relationship of bargaining, cooptation and coalition to the concepts of cooperation, conflict and competition may be diagrammed as given below.

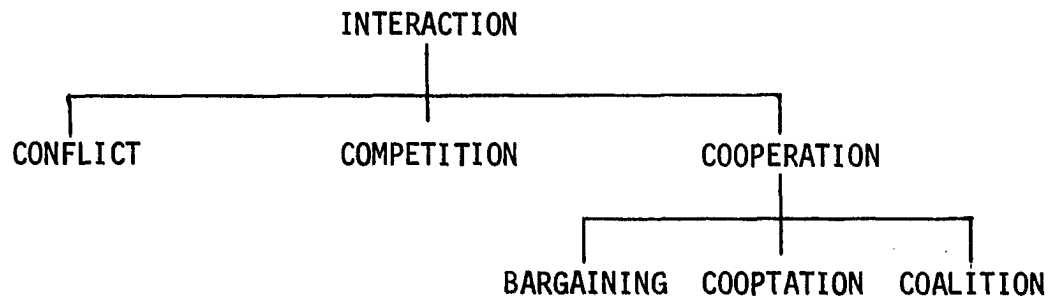


Figure 2.2. Forms of interaction

#### The Deterministic Nature of Exchange Relations

Thompson and McEwen's concepts of bargaining, cooptation and coalition provide a theoretical scheme from which the indicators of exchange relations to be used in this study will be developed. These items are: (1) director acquaintance; (2) director interaction; (3) information exchange; (4) resource exchange; (5) overlapping boards or councils; and (6) written agreements. Thompson and McEwen (1958:25) argue that the potential power of an outsider increases the earlier he enters into the decision-making process, and that the concepts of bargaining, cooptation and coalition are ordered " ... in terms of the degree to which they provide environmental control over organizational goal-setting decisions." Bargaining refers to agreements between organizations regarding exchange of goods and services. Thompson and McEwen assume that organizations must be aware of each other's existence and that representatives of these organizations must interact

with each other before bargaining may occur. Thus, the first four indicators of exchange relations to be used in this study--director acquaintance, director interaction, information exchange and resource exchange--appear to be consistent with the bargaining concept. Acquaintance with the county Extension director is the most basic measure of exchange relations between the Cooperative Extension Service and members of its organization set to be used in this study. The agency director must be acquainted with the Extension director in his county if interorganizational exchange is to occur. Once the directors have become acquainted, the next level of interorganizational exchange may occur. This involves personal interaction between the directors in order to discuss the activities of their respective agencies. This component still represents a fairly low level of exchange relations.

The next step is the exchange of information between organizations through publications, newsletters and other information releases. Organizations learn more about each other at this level. On the basis of this activity, a decision may be made to continue the relationship and to become more involved through higher levels of interorganizational exchange. The next highest level is the exchange of resources. This activity is basic to the exchange theory perspective. Viewed in the framework of Aiken and Hage (1968) and Levine and White (1961) as already discussed herein, organizations are essentially engaged in the exchange of resources for the purpose of goal attainment. Resources are assumed to be scarce commodities. Those organizations which do not possess sufficient resources to achieve their goals may elect to enter into exchanges with other organizations to acquire these resources. This activity is thought to represent a higher level of

exchange relations than the first three components in that it results in the actual exchange of physical resources between organizations.

Cooptation refers to the absorbing of new elements into the leadership structure in order to avert threats to an organization's existence. Another indicator of exchange relations used in this study deals with members of one organization who serve on boards of directors or councils of a second organization. One may view this situation in terms of Loomis' "systemic linkage" concept whereby a member of one organization who serves on the board or on a committee of a second organization provides a linking function between the organizations. Thus, interorganizational interaction is mediated through the individual who occupies this status-role. Cooptation in this manner represents a fairly high level of exchange relations.

Coalition occurs when two or more organizations combine to pursue a common purpose. The sixth indicator of exchange relations, written agreements between organizations pertaining to joint activities, may be considered an example of coalition. Every exchange of resources or implementation of joint programs or activities offers the potential for a written agreement between the parties delineating the terms of the exchange. Formalizing such an arrangement by putting it in writing would indicate a high level of exchange relations between organizations. Signing a written agreement would increase an organization's probability of receiving support from a second organization.

Thus, the six indicators discussed above represent increasing levels of interorganizational exchange and constitute components of a Guttman Scale of Exchange Relations to be tested in Chapter 4. The relationship of

the components of exchange relations to be used in this study to the concepts of bargaining, cooptation and coalition as discussed by Thompson and McEwen (1958) may be diagrammed as below.

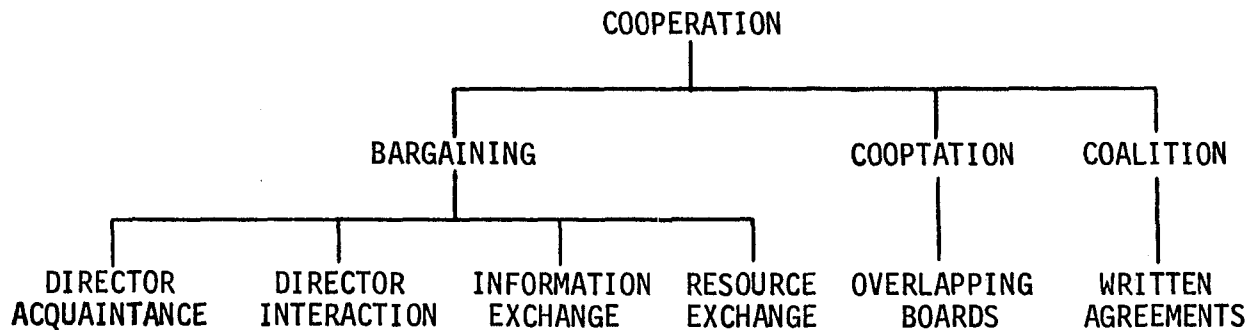


Figure 2.3. Relationship of indicators of exchange relations to the concepts of bargaining, cooptation and coalition

#### Joint Efforts

Another indicator of interorganizational exchange is joint efforts or activities. This indicator is important in this study because Extension frequently cooperates with other organizations through joint efforts. Extension's ability to function depends partially on other organizations with which it may cooperate. The importance of joint programs in inter-organizational relations has been recognized by several writers. Aiken and Hage (1968) utilized the number of joint programs of any given organization as the sole indicator of organizational interdependence among social welfare and health organizations. These authors note (1968:914) that, unlike exchanges of clients or funds (which may only imply the purchase of services) or other types of organizational cooperation, a joint program is often " ... a relatively enduring relationship, thus indicating a high degree of organizational interdependence." Aiken and Hage point out that

joint programs are becoming more frequent among universities and even organizations in the business world. Finley (1970) notes that joint activities involve interorganizational agreement to share costs and benefits. He classified programs or projects jointly conducted by organizations as a middle level of interorganizational involvement. Klonglan and Paulson (1971) utilize joint efforts as an example of Thompson and McEwen's coalition in their study of organizational interaction in the problem area of cigarette smoking and health.

#### Delineation of Variables Hypothesized to Influence the Intensity of Interorganizational Relations

Alternative theoretical perspectives for the analysis of interorganizational relations were presented in the first part of this chapter. Drawing on these works, a theoretical framework believed to be useful in analyzing the relation between county offices of the Cooperative Extension Service and members of their organizational sets was developed. In the following section, a number of variables theorized to be related to the intensity of interorganizational relations between a focal organization and members of its organization set will be introduced and stated in general hypotheses which will be operationalized and tested in the following chapters.

#### Domain consensus

The importance of domain consensus in interorganizational analysis has been recognized by several writers. Levine and White (1961) specify this concept as one of three major factors which determine whether exchanges between organizations will take place. These authors (1961:597) define

an organization's domain as

... the specific goals it wishes to pursue and the functions it undertakes in order to implement its goals. In operational terms, organizational domain in the health field refers to the claims that an organization stakes out for itself in terms of (1) disease covered, (2) population served, and (3) services rendered.

Levine and White contend that the exchange of resources rests upon voluntary agreements or understanding regarding how these resources will be used. They point out (1961:597) that "There may be no exchange of resources between two organizations that do not know of each other's existence, or that are completely unaware of each other's functions." By accepting a focal organization's domain, members of its organization set in effect provide the legitimation necessary for exchange transactions to occur. Thus, exchange agreements rest upon prior domain consensus between the interacting organizations.

According to Thompson (1967) the concept of domain consensus appears useful for analysis of all types of complex organizations. He (1967:29) has defined domain consensus as

... a set of expectations both for members of an organization and for others with whom they interact, about what the organization will and will not do. It provides, although imperfectly, an image of the organization's role in a larger system, which in turn serves as a guide for the ordering of action in certain directions and not in others.

Thompson points out that all organizations must establish a domain. However, establishing a domain is not an arbitrary process. An organization's domain may be operational only if its claims to its domain are recognized by those



agencies which can provide the necessary support. These agencies consist of the organization set, in Evan's terminology. Assuming that the focal organization offers resources which are judged as desirable by set organizations, and if domain consensus exists between the organizations, an exchange relationship may exist between them.

Warren (1969) has discussed domain as a key variable in decision-making. He (1969:4) conceptualizes this concept in terms of an agency's access to resources:

Domain is the organization's locus in the interorganizational network, including its legitimated "right" to operate in specific geographic and functional areas and its channels of access to task and maintenance resources.

Two important components in Warren's definition are the organization's right to do something and its access to resources necessary for goal attainment.

Braitto et al. (1971:2) point out that "Any discussion of inter-organizational analysis, either explicitly or implicitly, deals with the concepts of domain and domain consensus." Viewing domain consensus as a dependent variable, these authors conclude that high or low domain consensus is not necessarily a characteristic of particular organizational structures, but is, primarily, a function of the organization's domain or claims to problem areas which it sets out for itself. Thus, domain consensus " ... appears to be a function of an organization's domain rather than structural organizational characteristics" (Braitto et al., 1971:15). The authors also found domain to be related to resource allocation and endorsements, suggesting that organizations involved in a given problem are more

likely than those not involved to "legitimize" other organizations in that problem area.

On the basis of these considerations, the first general hypothesis may be stated as follows:

G. H. 1: The extent of domain consensus between a focal organization and a set organization is positively related to the intensity of exchange relations between these organizations.

### Extent of vertical orientation

Vertical orientation may be defined as the structural and functional relation of a local subsystem to extracommunity systems. One of the "great changes" in the modern community, according to Warren (1963) is the trend towards increasing systemic relationships to the larger society. Warren (1963:63) sees interdependence of communities not with each other as homogeneous wholes, but rather "... through the interrelation of their differentiated units as parts of national systems." This change is manifest in closer and stronger ties of most local activities to state and national counterparts, and in many cases, direct authority from outside. Many community-based units such as the Soil Conservation Service, Cooperative Extension Service, Employment Service and Welfare Service, are parts of two systems--the community system in which they are physically located, and the extracommunity system which may consist of an area or regional level, state level, and national level, in addition to the local level. Not only are most governmental services, but many voluntary organizations and locally-based businesses are also affiliated with state and national offices. Extracommunity ties of many of these organizations

are stronger than are the local community ties. Warren maintains that the "great change" operates to strengthen vertical ties and to establish new ties between community units and extracommunity systems. As a consequence of this vertical orientation, decisions of local groups regarding community projects and efforts may be determined by higher-level authorities. Assuming that vertical ties are being strengthened at the expense of horizontal ties, it is expected that higher-level authorities are more oriented to intraorganizational cooperation within the system than to interorganizational cooperation of system units to extra-system organizations at the local community level. Vertically-oriented organizations are less dependent on the environment for resources because of the possibility of support from within the vertical system. Horizontally-oriented organizations, which are not part of an extracommunity system, are more likely to engage in exchange relations at the community level in order to acquire needed resources. Thus, it would seem likely that an organization whose vertical ties to its extracommunity system are stronger than its horizontal ties to the local community would be less likely to engage in exchange relations with other local agencies.

The general hypothesis stated on the basis of the above considerations is as follows:

- G. H. 2: The extent of vertical orientation of a set organization is negatively related to the intensity of exchange relations between a focal organization and members of its organization set.

### Similarity of goals

Sociologists disagree on the role of goals or objectives in inter-organizational relations. Goals denote the desired states of affairs which staff members hope to realize through the operation of the organization. Evan (1966:182) hypothesizes that "The greater the degree of similarity of goals and functions between the organization set and the focal organization, the greater the amount of competition between them." Levine and White (1961) view mutual acceptance of each other's goals as a necessary condition for cooperation between organizations. They suggest that the organization's need for exchange, and range of possibilities for exchange, are determined by the organization's primary functions. In these terms, organizational interaction may be viewed as directed toward achieving goals of concern to the organization.

Reid (1964) hypothesizes that shared goals are one of three conditions that must be present before coordination may occur between organizations. He distinguishes between general goals stated in the official declarations of purposes and operational goals that determine decisions and actions, noting that these goals often bear little relation to each other. Most of the agencies Reid examined shared broad, formal goals relating to delinquency control and prevention. However, a great deal of this consensus apparently dissolved at the operational level, resulting in little basis for interorganizational coordination. Klonglan et al. (1969) found that organizational goals, as measured by services offered, were strongly related to the extent of interorganizational interaction. In a similar vein, Hollister (1970) suggests that organizations engage in exchange relationships because of similarity of functions.

It is expected that the possibility of mutually profitable exchange relations would be apparent to relevant staff members in those organizations with similar objectives in the broad area of rural development. These agencies would appear to have a stake in each other's goal attainment and may further their mutual objectives and reduce their burdens by entering into exchanges. The next general hypothesis may now be stated.

G. H. 3: The extent of similarity of goals between a focal organization and a set organization is positively related to the intensity of exchange relations between these organizations.

### Prestige

Prestige is a stratifying element which would appear to affect relations among organizations. This concept denotes in general the influence exercised by individuals, groups, institutions and/or the standing enjoyed by such individuals or groups. Prestige may rest upon the quality of goods or services produced by the organization, as judged by those capable of evaluating the product. Organizations are dependent upon the environment for many resources, such as personnel, charter to operate, operating revenue and funds for expansion and development. Perrow (1961) maintains that one way organizations may control dependency is by creating and maintaining a favorable image with the relevant publics. He points out that an organization which is well regarded may more easily attract personnel, influence relevant legislation, wield informal power in the community, and maintain an adequate number of clients, customers or donors. It would seem reasonable to expect that an agency which is well regarded by other organizations in its environment would also be thought of as a

more attractive potential interaction partner by these organizations.

Finley (1970) found a positive relationship between interorganizational relations and prestige as measured by organizational attractiveness to members of the community. Levine and White (1961) found that organizations high in prestige, as rated by influential members of the community, lead in the number of joint activities. Homans (1950:145) expresses a similar stance in his proposition regarding social ranking and interaction among the workers in the Bank Wiring Observation Room: "The higher a person's social rank, the wider will be the range of his interactions." Although Homans' "range of interactions" refers to the number of persons a man interacts with, it would seem that the sheer frequency of interaction may also be implied in his proposition.

The general hypothesis formulated on the basis of the above discussion is as follows:

- G. H. 4: The amount of prestige of a focal organization as perceived by a set organization is positively related to the intensity of exchange relations between these organizations.

#### Complexity of organizational structure

Complexity has been defined by Hall et al. (1967:906) as the "... degree of internal segmentation--the number of separate 'parts' of the organization as reflected by the division of labor, number of hierarchal levels and spatial dispersion of the organization." This concept is consistent with Aiken and Hage's (1968) conceptualization of organizational diversity in terms of occupational structure. These authors argue that internal diversity creates a strain toward innovation, which in turn

results in greater propensity to engage in joint activities with other organizations. They point out (1968:915) that conflict between different occupational types within an organization

... results in new ways of looking at organizational problems. The likely result of this is a high rate of both proposals for program innovations as well as successful implementation of them.

But occupational diversity also implies greater knowledge of changes in the organizational environment. These factors--internal conflicts and awareness of the nature of the organization's environment--in effect "push" organizations into interdependencies in order to secure needed resources.

It seems likely that an organizational structure characterized by numerous different paid and volunteer positions might offer greater opportunity for different occupational types, thus resulting in a strain toward innovation and change. Individuals representing different occupational types may perceive the organization's problems in new and different ways, thus offering more suggestions for innovations designed to help solve these problems, or to help the organization attain its goals. Individuals in different occupational types also may be more aware of different aspects of the organization's environment. Organizations need resources to pay the costs of implementing innovations. The more innovations or new programs an organization originates, the more resources it will need to implement these programs. The exchange model holds that resources are scarce commodities. Thus, innovating organizations must engage in exchange relationships with other organizations in order to acquire these necessary

resources. In addition, as Klonglan and Paulson have noted (1971) it is expected that a complex organizational structure might offer more opportunities for the organization to become involved in interorganizational relations through one of its "parts." The less complex organizations, those with fewer different positions, would be expected to be less able to adopt new activities. The next general hypothesis may now be stated:

- G. H. 5: The complexity of organizational structure of a set organization is positively related to the intensity of exchange relations between a focal organization and members of its organization set.

#### Program innovation

For purposes of this study, program innovation is defined to include both new services and programs initiated by an organization. Aiken and Hage (1968) conceptualize interagency relations in terms of interdependencies or joint programs between organizations. They hypothesize that a high degree of program innovation varies directly with the number of joint programs. They reason that a heightened rate of innovation is a function of internal organizational diversity. Organizational innovation, in turn, increases the need for resources to pay the costs of implementing the innovations. These resources may include money, staff, space and time. As more changes are introduced within a given period of time, more resources will be needed, resources generally not available within the organization. Leaders of innovating organizations will seek needed resources. One source of such resources is other organizations in the environment. Thus, a solution is to create a joint program with another



organization. This process may be viewed as a form of exchange between organizations, with a small amount of autonomy being sacrificed in order to gain the needed resources.

Applied to the present study, it is expected that organizational interaction patterns would be most extensive between agencies which need additional resources because of a heightened rate of innovation. Set organizations which rank high in program innovation will seek these additional resources by becoming involved in exchange relations with a focal organization. Thus, the next general hypothesis may be stated as follows:

- G. H. 6: The innovativeness of a set organization is positively related to the intensity of exchange relations between a focal organization and members of its organization set.

#### Perceived benefit of interaction

When viewed in the framework of the exchange model, perception of benefits to be received would appear to be a major motivating factor in involvement in interorganizational interaction. Blau (1964) sees exchanges as actions of individuals that are motivated by returns they are expected to bring. One individual is attracted to another because he expects the association to be rewarding to himself. Thus, he initiates an attempt to gain a benefit from the other actor. Interaction occurs if the other believes he will also benefit from the interaction.

Expected benefit of interaction is a key element in Levine and White's exchange framework (1961) of viewing interactions between health organizations. These authors see an organization's need to obtain resources as

reason for engaging in exchange relations. Few organizations have sufficient resources to allow them to fully achieve their objectives. Thus, they engage in exchanges to obtain the desired resources, and therefore, must benefit from the exchange if it is to continue. Perceived benefit of interaction also is implied in Aiken and Hage's view (1968) that organizations are forced into interrelationships with other organizations because of a need for resources to pay the costs of implementing innovations. The elements received in the exchange must be of sufficient benefit to offset the costs of creating such interdependencies if the relationship is to continue.

A similar relationship would be expected in the exchange between the Extension Service and members of its organizational set. For example, Extension may attempt to interact with the Soil Conservation Service for the purpose of gaining certain benefits. If the Soil Conservation Service also believes it will benefit, then interaction between the two agencies is more likely. The general hypothesis formulated on the basis of the above discussion is as follows:

- G. H. 7: The benefit of interaction as perceived by a set organization is positively related to the intensity of exchange relations between a focal organization and members of its organization set.

#### Size of resource base

Resources may be defined as those elements that an organization needs to achieve its goals. These elements include facilities, services, specialized knowledge, funds, clients and personnel. Thus, the size of an

organization's resource base is a quantitative measure of all elements at its disposal which may be expected to contribute to attainment of its goals.

Several sociologists have alluded to the size of an organization's resource base as a key variable in the understanding of interorganizational relations. Levine and White (1961) point out that few, if any, organizations have sufficient resources to enable them to attain their objectives fully. Goal attainment " ... requires access to certain kinds of elements, which an organization seeks to obtain by entering into exchanges with other organizations" (1961:587). It seems reasonable to expect that organizations with a large resource base will be better able to provide these needed resources to other organizations with which they interact.

Emphasizing the cost of creating interdependencies with other organizations, Aiken and Hage (1968) point out that organizations must utilize some of their own resources in order to carry out coordination. It would be virtually impossible for organizations with no surplus resources to engage in joint programs. The authors (1968:915) conclude that "There must be some slack in the resource base in the organization before any innovation or cooperative venture is likely."

Klonglan et al. (1969) found a positive association between agency resource size and interorganizational relations in a study involving local service centers of the Iowa Comprehensive Alcoholism Project and members of their organization sets. They reason that costs of participation in interorganizational relations for these organizations were the least relative to total resources available. Also, agencies with a large number

of clients were expected to have had more clients with drinking problems and thus would have had a greater need for working with the ICAP.

It seems likely that a large resource base provides the internal flexibility which allows set organizations to become targets for exchange with a focal organization. Assuming that few organizations have an overabundance of resources, those with a large resource base are better able to reallocate existing resources to new programs without damaging or eliminating ongoing programs. Thus, an organization with a large resource base would appear to be an attractive target for other agencies which wish to engage in interorganizational interactions for the purpose of exchanging resources. The next general hypothesis may now be stated:

- G. H. 8: A set organization's size of resource base is positively related to the intensity of exchange relations between a focal organization and members of its organization set.

#### Control Variables

The previously stated hypotheses have had as their purpose to examine the relationship between a series of single independent variables and the dependent variable. However, this analysis provides rather limited insight into the dynamics of interorganizational behavior in that possible relationships between the independent variables are not considered. Thus, the analysis of bivariate relationships may indicate which factors are individually related to the extent of interorganizational relationships between a focal organization and members of its organization set. However, in order to advance the study of interorganizational relations, it is necessary to determine whether these relationships hold under different

conditions. For this reason, several control variables will be selected and their influence on the previously discussed bivariate relationships will be determined. These control variables will be discussed in this section.

### Domain consensus

General Hypothesis No. 1 investigated the relationship between domain consensus and the extent of interorganizational relations. It was hypothesized that the intensity of interorganizational relations between a focal organization and members of its organization set is positively related to the extent of domain consensus between the focal organization and the set organization. As Thompson (1967:28) points out, "Only if the organization's claims to domain are recognized by those who can provide the necessary support, by the task environment, can a domain be operational." Organizations in this study are perceived to be engaged in exchange relations with their organization set members. The exchange model holds that an organization may receive the inputs it needs to survive only if other organizations perceive that it offers something desirable in return. However, the exchange relationship is based on consensus regarding each other's domain. Thus, domain consensus influences the ability of an organization to maintain itself. Braito et al. (1971:3) point out that organizations engage in exchange processes to the degree they are dependent upon their environment for resources, and " ... domain consensus, conceived along a continuum, would be necessary."

Thompson (1967:29) has defined domain consensus as " ... a set of expectations both for members of an organization and for others with whom

they interact, about what the organization will and will not do." He notes that domain consensus provides an image of one organization's role in the larger system, and this image in turn guides the action in certain directions. If a high degree of domain consensus exists between a focal organization and a set organization, this would indicate a high degree of agreement by both organizations that they both will do certain things and will not do certain other things. Following Thompson's argument, these organizations see their roles in the larger system as being similar, and this factor orders their action in certain directions. It is expected that one result would be a higher degree of interaction between the organizations.

The extent to which organizations accept each other's domain in the area of rural development would seem to have implications for the results of other hypotheses tested in this study. Controlling for domain consensus will indicate that each of the independent variables has an independent relationship with interorganizational exchange, or that the relationship depends on domain consensus.

#### Membership in an interagency system

One development which has accompanied the recent proliferation of organizations in American society is the emergence of second-order organizations designed to coordinate the activities of first-order organizations. Etzioni (1968:7) likens this development to the two so-called revolutions in the realm of machines: "... mechanization of work and mechanization of control of the machines that work." In the societal realm, the first revolution involved the development of the modern organization or "societal

machine" which provided a more effective way of getting things done. The second societal revolution "involves the control by second-order organizations of the first-order organizations which do the work" (Etzioni, 1968:7). Mott (1970) refers to "managed" coordination--that accomplished by coordinating mechanisms designed to coordinate other organizations. He distinguishes "managed" coordination from "unmanaged" coordination which occurs in a random or self-regulating manner. Most of the coordination or interaction which occurs among organizations in the present study would appear to be "unmanaged." However, the occurrence of "managed" coordination is made possible by the presence of county Rural Development Committees. These committees emerged as by-products of the formation of the Rural Affairs Council in 1969. This council charged the United States Department of Agriculture with the responsibility of helping individuals and communities in rural areas improve their quality of life. In response to this assignment, the USDA directed that the Soil Conservation Service, Farmers Home Administration, the Cooperative Extension Service, the Forest Service and the Rural Electrification Administration form Rural Development Committees at the federal and state levels. One of these agencies--the Extension Service--is the focal organization in this study, while two others--the Soil Conservation Service and the Farmers Home Administration--are designated as set organizations. Another set organization--the Agricultural Stabilization and Conservation Service--has been invited to join the committees at all levels, and in almost all cases has done so. District foresters--also members of Extension's organization set--are members of the Rural Development Committees in the counties in which their offices are located. These committees were active in fifteen of the

sixteen sample counties at the time of the survey. Rural Development Committees were encouraged to expand their membership to include other development-related organizations. Expansion has taken place in several of the sample counties, and organizations such as the rural electric cooperatives, the Employment Office, and industrial development organizations--which are included as set organizations in this study--have become members of Rural Development Committees in several counties. Guidelines for the operation of the committees emphasize the need for interorganizational relations. Thus, it would be expected that organizations which are active members of the county Rural Development Committees would be more likely to engage in exchange relations with Extension than nonmembers. But what effect might an organization's membership in the committee have on the relationship between the independent variables being considered in this study and interorganizational exchange? For example, one could argue that committee membership acts as an intervening variable between extent of vertical orientation and interorganizational exchange. That is, vertical orientation leads to Rural Development Committee membership, which in turn leads to exchange. Controlling for Rural Development Committee membership will indicate whether the relationship between each of the independent variables and interorganizational exchange is independent, or is simply a function of this control variable.

#### Similarity of goals

There appears to be a lack of clear agreement on the role of goals or objectives in interorganizational relations. In this study it was hypothesized that the intensity of exchange relations between a focal



organization and members of its organization set is positively related to the extent of similarity of goals between the focal organization and the set organization. The rationale for hypothesizing a positive relationship is based on the expectation that organizations with similar objectives have a stake in each other's goal attainment and may further their mutual objectives and reduce their burdens by entering into exchanges. However, because of the disagreement among sociologists on whether goal similarity enhances or hinders interorganizational interaction, it would seem that further analysis of this concept is warranted. It is hoped that utilizing similarity of goals as a control variable in the analyses of the hypotheses in this study may shed light on the role of this concept in understanding interorganizational behavior.

### CHAPTER 3. METHODS AND PROCEDURES

The research problem and objectives were introduced in the first chapter of this dissertation. In the second chapter, the theoretical framework was developed and a number of general hypotheses were derived. The third chapter will focus on the methodological procedures to be used in gathering and analyzing the data. This chapter will consist of seven sections. The focal agency and the study agencies will be described in the first two sections. The third section will describe the study methods used for collecting the data. The theoretical concepts will be operationalized and the empirical hypotheses stated in the next three sections. Procedures used for testing the hypotheses will be discussed in the final section.

#### Description of the Focal Agency

The focal agency for this study is the Cooperative Extension Service, which dates back to the Smith-Lever Act of 1914. The Extension Service is the educational arm of the United States Department of Agriculture. Its primary goal is to extend to both rural and urban audiences knowledge that is relevant for the fulfillment of individual and group goals. The Extension Service assists in the interpretation and application to everyday problems of the latest technology developed through research by the land-grant universities, the United States Department of Agriculture, and other sources.

Structurally, the Extension Service consists of three levels: the Federal Extension Service, a branch of the United States Department of Agriculture headquartered in Washington, D.C.; state Extension services,

located in the land-grant university of each of the fifty states; and the county Extension offices, located in the county seat of nearly every county in the United States. In addition, many states have area Extension offices, which conduct programming on a multi-county basis. Primary interest in this study is focused on the county Extension office, which will be considered the focal agency.

At the federal level, Extension maintains a small professional staff of specialists trained in agriculture, marketing, home economics, community resource development, 4-H and youth work and other activities. The land-grant universities have a similar staff of specialists, plus county and area staffs located throughout the state. County and area offices are staffed according to need and vary from one to several agents per county. The Federal Extension staff provides technical and organizational assistance to state counterparts. State specialists provide technical assistance to county and area staffs, organizations and groups, interpret research, and prepare educational materials for use in Extension programs. At the county level, where interest in this study is focused, Extension agents work directly with individuals and groups to help them apply new and better technology to increase incomes; develop natural, human and community resources; and improve family living and youth development programs. Funding for county offices is provided by the federal, state and county governments. Salaries of professional staff members are made up of funds from all three sources. The balance of the operating budget is provided from county funds.

Rural people have always made up Extension's primary audience. However, Extension has expanded its educational efforts from purely technical

agricultural production during the past fifty years to marketing and agricultural business, problems of families and youth, problems bearing on general land and water resource planning and use, and other significant problems. Thus, in a broad sense, most Extension programming could be considered directed toward rural development. In the more specific area of community resource development, Extension conducts educational programs for individuals, groups, and personnel of public and private agencies interested in developing the social, cultural and economic livability of their community. Purpose of these programs is to stimulate interest and help local development leaders analyze their problems, recognize opportunities, evaluate viable alternatives, establish priorities, and organize to achieve their goals. Extension also trains local leaders in the use of government and private services and resources for development; provides professionals from the land-grant universities to assist local groups; and helps local leaders evaluate progress toward locally identified goals and report this to the community.

Conceptually, the county Extension office could be described as follows. Each county office is a focal organization with a broad domain consisting of agricultural production, marketing and agricultural business, homemaking and youth activities, and community resource development. Segments of this domain are claimed by numerous other agencies and organizations in the county. Most county offices are limited in resources for the fulfillment of their goals and a level of interdependence with other community organizations exists. Thus, numerous other agencies become elements of Extension's organization set. The goal of interorganizational relations between the Extension office and other community agencies is to

improve the quality of life for all residents of the county. An important function Extension performs in its effort to accomplish this goal is to attempt to enhance relations between other organizations and agencies and to encourage individuals and organizations to use services available from action agencies.

### Selection of the Study Agencies

The major criteria for the selection of the agencies to include in Extension's organization set were: (1) that the agency have county-wide responsibility; and (2) that it be involved in rural development activities or have development-related programs. The fourteen agencies specified as members of Extension's organization set were: Soil Conservation Service, Agricultural Stabilization and Conservation Service, Farmers Home Administration, Forest Service, rural electric cooperatives, Farm Bureau, ministerial associations, bankers associations, Social Welfare, Employment Service, Community Action Agencies, zoning commissions, industrial development organizations, and county conservation boards. Since not every agency had a local unit in each study county, the total number of agency units delineated for study totaled 153. Each of the study agencies is described below.

#### Soil Conservation Service

The Soil Conservation Service (SCS) provides technical assistance to individuals, groups, and local and state governments to help improve the use of water and land resources. This agency of the United States Department of Agriculture works through local conservation districts, which generally coincide with county lines. District conservationists are

responsible to an area conservationist. The SCS provides financial and technical help for watershed protection and flood prevention projects, which provide dependable water supplies for farmers and small town residents, and flood protection. The agency also assists local citizens to develop and carry out multicounty resource conservation and development projects. These projects are designed to improve the areas's economy, social conditions, health and education facilities and the use of natural resources. SCS also provides technical assistance to landowners to establish outdoor recreation areas and stimulates towns and counties to develop public recreation areas.

#### Agricultural Stabilization and Conservation Service

The Agricultural Stabilization and Conservation Service (ASCS) is a branch of the United States Department of Agriculture, and is organized on a county basis. The ASCS administers programs designed to stabilize the nation's agricultural economy, conserve farm resources, protect food and feed reserves and aid in defense. ASCS programs attempt to balance supply and demand of certain farm products through production adjustments, price support loans, purchases and payments, and management of stocks of commodities acquired under its programs. These programs are carried out through farmer committees appointed at the state level and elected at county levels. Individual farm operators make up the client systems for price support and conservation and land-use adjustment assistance programs. Disaster relief is provided through direct assistance to farmers and ranchers whose supplies have been destroyed or whose farmlands have been seriously damaged by widespread flood or drought.

### Farmers Home Administration

The Farmers Home Administration (FHA) is the rural credit agency of the United States Department of Agriculture. The FHA is organized on a county basis, with the county administrators responsible to district supervisors. This agency provides loans and grants to individuals, groups and communities to finance a broad spectrum of programs contributing to rural development. Loans are made only to individuals and groups unable to obtain credit elsewhere, and only in communities of not larger than 5,500 population.

Objectives of this agency are to provide financial and management assistance to strengthen family farms and rural communities and to reduce rural poverty. Among the different types of loans are operating loans to assist operators to make improved use of their land and labor resources, farm ownership loans to buy or enlarge farms and construct and repair buildings, recreation loans to convert farm land to recreation use, water and waste disposal loans to public bodies and nonprofit organizations to construct rural community water and waste disposal systems, and economic opportunity loans to improve farming or develop small businesses. Other types of loans available from the FHA include emergency loans, soil and water conservation loans, rural housing loans, watershed loans, and resource conservation and development loans.

### Forest Service

The State Forest Service is a division of the Iowa Conservation Commission. Offices are located in districts that serve several counties. District foresters are responsible to the State Forester. They assist

private timber owners with timber management problems, providing technical management advice and assistance peculiar to each individual's wood stand. District foresters inventory woodlots, help select trees for harvest, locate markets, provide planting advice, make timber-improvement recommendations and determine the recreational potential of woodlots for campgrounds. District foresters are responsible for the technical phases and inspections of the Federal Agricultural Stabilization and Conservation Service cost sharing forestry practices, including tree planting and timber stand improvements. In addition, the State Forest Service is responsible for promoting the conservation and best use of the more than 19,000 acres in the State Forest System. The Forest Service also assists other public agencies in timber management and related activities.

#### Rural electric cooperatives

Local rural electric cooperatives are organized on an area coverage basis and not along county lines. General managers of these private corporative organizations are generally responsible to a board of directors. Financing is obtained from the Rural Electrification Administration. The basic goal of rural electric cooperatives is to supply low-cost, dependable electric service to member consumers. However, a growing number of these consumer-owned cooperatives are emphasizing rural development activities. They are sponsoring, promoting and in some cases building new houses, schools, parks, golf courses, swimming pools, hospitals and factories in rural areas which they serve.

#### Social Welfare

The Social Welfare agencies are organized on a county basis, and are financed by funds provided by the county, state and federal governments.



Local agency directors are responsible to regional representatives of the State Department of Social Welfare and to a Welfare Board appointed by the Board of Supervisors in each county. In addition to financial assistance, Social Welfare agencies provide direct aid, casework and counseling services. These agencies administer a series of ten programs designed to assist individuals who are socially and economically disadvantaged. Their programs include old age assistance, medical aid to the aged, aid to dependent children, aid to the disabled, aid to the blind, child welfare, emergency relief, Indian relief, work experience, surplus food, and food stamps. Each of these programs has certain requirements and qualifications which must be met before the recipient is placed on the public assistance rolls. The State Department of Social Welfare handles the applications and determines the eligibility of the recipients.

#### Industrial development groups

Industrial development groups are organized for the purpose of securing new industries and new employment for the community. These organizations operate on a community basis either as private corporations or as divisions of the community's chamber of commerce. Industrial development corporations are headed by a general manager who is responsible to a board of directors. If affiliated with a chamber of commerce, the director sometimes also serves as the manager of the chamber. Objectives of these organizations generally are to assist new industries and business establishments to locate in the community and to assist industries and businesses already established in the community to expand, diversify and operate on a sound basis. To carry out these objectives, industrial development

organizations purchase real estate, buildings and machinery and make these available to new or already established industries. Loans also are made to help industries get established or expand.

#### County conservation boards

Conservation boards are organized on a county basis and are financed by the county government through a millage levy. The purpose of these boards is to control and manage land and other property acquired for parks, public museums, game preserves, recreation centers, wildlife centers and other recreation areas. Primary functions are to study the need for conservation and recreation facilities and to acquire in the name of the county suitable real estate to be developed into these facilities. Other functions are to administer and maintain all such areas, charge fees for their use, and to formulate rules for their protection. County conservation boards are responsible to the county board of supervisors. However, the acquisition and development of lands by the conservation boards must first be approved by the State Conservation Commission before the program may be executed. Each conservation board consists of a board of directors empowered to set policies designed to accomplish the above goals and an executive officer and several workmen responsible for carrying out these policies.

#### Community Action Agency

Community Action Agencies are private nonprofit corporations established and financed by the Federal Office of Economic Opportunity. Despite the reliance on federal funding, local Community Action Agencies are directly responsible to a local board of directors which establishes the

local agency and secures financing for it. These agencies are organized on a district basis, with each district serving several counties. Their general objective is to mobilize all available local, state, private and federal resources in an attempt to help low income families help themselves. Thus, their mission is to make the entire community more responsive to the needs and interests of the poor by mobilizing resources and bringing about greater institutional sensitivity. Among the services offered are Head Start Programs, drug rehabilitation, comprehensive health services, and family planning and counseling in a number of areas. Community Action Agencies attempt to utilize and supplement the work of other community service agencies. To be eligible for most of the services offered by these agencies, individuals or families must have low incomes and be classified as "living in poverty."

#### Iowa State Employment Service

This service is organized on a district basis, with each district being composed of several counties. Local office personnel are responsible directly to the Iowa State Employment Service, but are affiliated with the United States Employment Service. Financing is provided by the federal government. Most of the offices offer occupational testing, counseling and job placement services. The only eligibility requirement for these services is a need for such aid. Other special programs include special veterans services, special services to the handicapped, manpower training under the Manpower Development and Training Act, and special job mobility services. Eligibility requirements for these programs vary.

### Farm Bureau

The Farm Bureau was originally a part of an education movement closely tied to Extension's educational programs, but separated from Extension in Iowa in 1955. Today the Farm Bureau is an independent voluntary organization of farm and ranch families associated to protect and promote the economic, social and educational interests of American farm people. The Farm Bureau is organized on a county basis, and is headed by a president and board of directors in each county. The county organizations are federated together to form a State Farm Bureau, and the respective state organizations are in turn federated into the American Farm Bureau Federation. Farm Bureau's program stems from policy and program resolutions developed by the membership. Legislative and commodity programs are emphasized, and the Farm Bureau also offers such services as cooperative purchasing of farm supplies, cooperative marketing, an electronic farm record service, and several types of insurance coverage.

### Zoning commissions

Zoning commissions are organized as a part of the county governmental structure. They are appointed by and report directly to the county board of supervisors. Most zoning commissions consist of three or five members. They are advisory bodies which have no specific authority except the power to recommend a course of action for the board of supervisors to follow. Their goals are to oversee the proper arrangement of land use and to assure that growth in the county takes place in an orderly manner. Zoning commissions have two major responsibilities: (1) to prepare a comprehensive plan to guide the physical development of the county;

(2) to prepare a zoning ordinance designed to guide community change into the patterns proposed by the comprehensive plan. If the zoning ordinance is adopted by the board of supervisors, the zoning commission may make recommendations on any subsequent amendments or changes in the ordinance.

#### Bankers associations

Bankers associations are organized on a county basis, and generally consist of one or more representatives of each of the commercial banks in the county. These organizations vary widely as to their functions. Bankers associations in several counties are primarily social organizations designed to provide an opportunity for members to become better acquainted. In other counties they provide a means for members to discuss mutual banking problems, work to bring about uniform banking conditions, promote a better image for the banking industry, and carry out service programs for the benefit of the community. Bankers associations have their greatest impact on community programs through donations for such events as Extension's 4-H programs and county fairs, and also provide scholarships and funds to send deserving youth to summer camps.

#### Ministerial associations

Ministerial associations are made up of representatives from each of the different religious denominations which maintained churches in the county. Their primary objectives are twofold: to foster better understanding between denominations and to cooperate together to carry out specific community action programs in the county. Many of these programs involve the disadvantaged, for example rehabilitation and transient funds for the needy. Ministerial associations also serve as referral agencies,

providing the names of persons who need psychological help to the county nurse in one county and providing names of recipients who qualify for care for the aged programs in another county. Ministerial associations help initiate drug abuse programs and mental health institutes and provide funding for chaplains to visit hospitals.

### Collection of Data

#### Interview schedule and questionnaire

Two techniques were employed to gather data for this study--field interviews and the use of a mailed questionnaire. Respondents were the county Extension directors and the top administrators of selected agencies which make up Extension's organization sets. The data represents only part of a larger overall study designed to investigate organizational coordination in rural development, with particular emphasis on organization of rural development committees in local communities. The total research project was directed by Dr. David L. Rogers, assistant professor in the Department of Sociology and Anthropology at Iowa State University. The author became actively involved in the project after the overall research problem had been conceptualized, but did make inputs into the construction of the interview schedule and questionnaire.

The interview schedule was used for structured personal interviews with Extension directors and agency respondents. This schedule contained questions regarding the organization's goals, involvement in development activities, interaction with other organizations involved in development, and involvement in rural development committees. A pre-interview questionnaire contained questions about the agency's organizational structure.

This questionnaire was developed to be mailed to the agency respondents prior to the personal interview in order to simplify data collection and reduce the time required for the interview. Prior to its use in the field, the interview schedule was pretested by the project director, the author and another graduate assistant on the directors of several agencies located in counties not included in the sample. On the basis of this pre-test, the interview schedule was revised by deleting several questions and altering the order in which some of the questions were to be asked.

The author participated in the field interviewing, and also supervised and coordinated the work of several other interviewers. The interviewing was conducted during August and September, 1971. Appointments were made with the respondents by telephone, and the interviewers picked up the completed pre-interview questionnaires at the time of the personal interviews.

#### Selection of the study counties

Extension offices are located in all ninety-nine Iowa counties. Only sixteen of these counties are included in the study. The counties studied do not represent a randomly drawn sample. Rather, the sample was purposive in nature, stratified on the basis of geographical location, population and population change, and level of poverty. Also, it was desired to include some counties with urban growth centers and some that were primarily rural. Three counties which included urban growth centers were selected: Wapello County (Ottumwa), Cerro Gordo County (Mason City), and Dubuque County (Dubuque). Four counties adjacent to each of these three counties were selected with the purpose of making the sample representative of the

entire state on the basis of the factors mentioned above. Story County also was included in the sample because it fit the sample in terms of the factors discussed above, and also because of its accessibility to the researchers. Figure 3.1 indicates the location of the sixteen counties included in the sample.

Special procedures regarding organizations organized on a district basis

Respondents were asked questions regarding their interaction with each of the other organizations discussed above. Special procedures were used in those cases where the organization was organized on a district or area basis, and was responsible for several counties. Respondents from district organizations located in sample counties were asked about their interaction with other organizations only in the county in which the district office was located. When counties for which the district office has jurisdiction were included in the sample, the directors of organizations located in these counties were asked about their interaction with the director of the district office. For example, the head of the Community Action Agency in Wapello County, whose district includes three other counties included in the sample--Jefferson, Davis and Mahaska Counties--was asked about his interaction only with other agencies which have offices in Wapello County. However, agency respondents in Jefferson, Davis and Mahaska Counties were asked about their interaction with the Community Action Agency director in Wapello County.

In several cases the district office was located in a county not included in the sample, but had jurisdiction over one or more counties which were included in the sample. In these instances, the director of



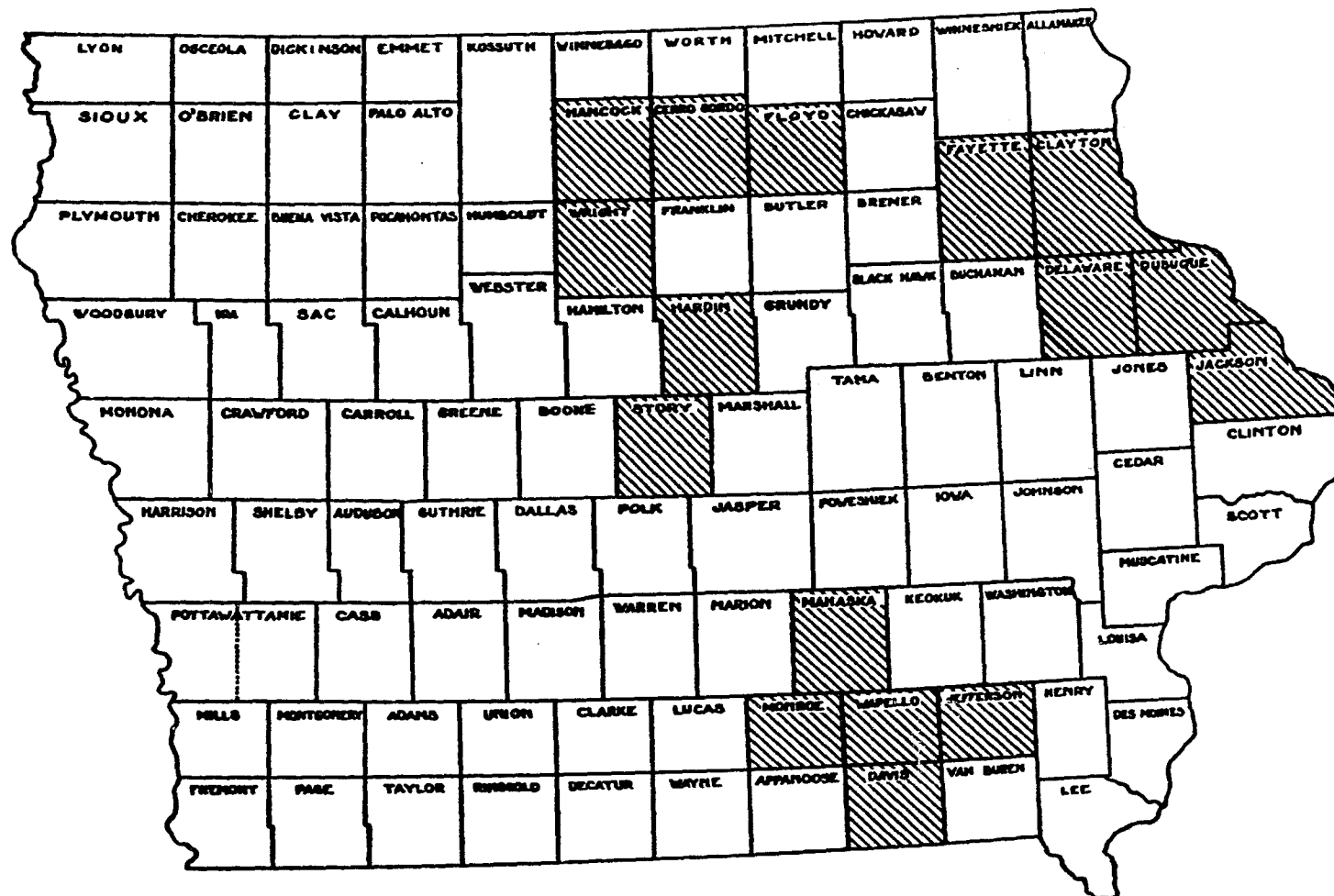


Figure 3.1. Counties included in the sample

the district office was questioned about his interaction only with other agencies with offices located in the sample county nearest to his county. Agency respondents in the sample counties under his jurisdiction were asked about their interaction with the district agency director. For example, the Community Action Agency director in Winneshiek County, which is not included in the sample, had jurisdiction over Fayette and Clayton Counties, which are included in the sample. The Community Action Agency director in Winneshiek County was asked about his interaction only with organization directors with offices located in Fayette County, which is located closer to Winneshiek County than Clayton County. Directors of agencies with offices located in Fayette and Clayton Counties were asked about their interaction with the Community Action Agency director located in Winneshiek County.

#### Operationalization of the Dependent Variables

Two empirical measures of interorganizational relations between a focal organization and members of its organization set will be used in this study. The first is called the Exchange Relations Scale. This measure consists of component scores for six different possible areas of exchange relations as discussed in Chapter 2. These areas are: (1) director acquaintance; (2) director interaction; (3) information exchange; (4) resource exchange; (5) overlapping boards or councils; and (6) written agreements. On the basis of these six items, the Guttman scaling technique (scalogram analysis) was used to construct a scale for measuring exchange relations between organizations. The Guttman scalogram technique is a procedure which orders cases in terms of unidimensionality and combines

multiple items into a composite measure (Riley, 1963). The use of this technique is, in effect, the test of a hypothesis that the items do "go together" and form a unidimensional scale. A unidimensional scale measures movement toward or away from the same single underlying object. Thus, it measures one variable only. In this study, that variable is the extent of exchange relations between organizations. Nie et al. (1970) note that Guttman scales differ from almost all other types of scales and indexes in that they must be cumulative. Items in a cumulative scale may be ordered by degree of difficulty so that persons who respond to a given item favorably all score higher on the scale than those who respond to the same item unfavorably. From a respondent's rank or scale score, the researcher may know which items he endorsed and which items he did not endorse. Thus, he can reproduce the responses to each item from knowledge only of the total score.

The scoring system used for the scale was to count the number of items which each respondent successfully passed. This score will be known as the Exchange Relations Score. A brief discussion of each of the six components of the score follows:

Component score 1: director acquaintance

The first component of the Exchange Relations Score is acquaintance with the county Extension director. This measure represents the lowest level of exchange relations between the Cooperative Extension Service and members of its organization set to be used in this study. Respondents were asked two questions regarding their acquaintance with the Extension director in their county:

As far as you know, is there an Extension Office in this county?

(If yes) Are you acquainted with the director or person in charge of this office?

Respondents are considered to have passed this item if they answered "yes" to both questions.

### Component score 2: director interaction

The second component of the Exchange Relations Score deals with personal interaction between respondents and the Extension director in their counties. This item represents a slightly higher level of exchange relations than the first component in that the respondent must be acquainted with the Extension director before the two may interact. Respondents were asked this question only if they had indicated they were acquainted with the county Extension director:

Have you met with the director of the Extension Office at any time during the past year to discuss the activities of your respective agencies?

Respondents are considered to have passed this item if they answered "yes" to the question.

### Component score 3: information exchange

The third component of the Exchange Relations Score deals with a measure of the exchange of information through publications, newsletters and other information releases. Perhaps the simplest way of providing these materials to another organization is to place that organization on a mailing list. The resulting arrangement could properly be termed an exchange if two organizations were on each other's mailing lists. It also could be considered an exchange if one organization placed a second

organization on its mailing list with no immediate reciprocal action on the part of the second organization, if the action fostered a reciprocal obligation on the part of the second organization, to be repaid at some future date. Exchange of information through mailing lists is thought to represent a higher level of exchange relations than acquaintance or interaction with the county Extension director. Respondents were asked:

Is the Extension Office on your organization's mailing list to receive your newsletters, annual reports and other information releases?

Is your organization on the mailing list of the Extension Office to receive any of their newsletters, annual reports or other information releases from them?

Respondents are considered to have passed this item if they answered "yes" to either of these questions.

#### Component score 4: resource exchange

The exchange of resources between organizations is thought to represent a higher level of exchange relations than the first three components in that it results in the actual exchange of physical resources. Exchange may occur if two organizations provide resources to each other, or if one organization provides resources to a second organization. In the latter case, the action is considered to have fostered a reciprocal obligation on the part of the second organization which may be repaid at some future date. Respondents were asked two questions regarding the exchange of resources with Extension:

Has your organization shared, loaned or provided resources such as meeting rooms, personnel, equipment or funds to the Extension Office at any time during the last two years?

Has the Extension Office shared, loaned or provided resources

such as meeting rooms, personnel, equipment or funds to your organization at any time during the last two years?

Respondents are considered to have passed this item if they answered "yes" to either of these questions.

Component score 5: overlapping boards or councils

Securing the services of personnel from one organization to serve on boards, councils or committees of a second organization represents a fairly high level of exchange relations. Coopting personnel in this manner allows an organization to obtain assistance in operating and legitimizing its domain. Respondents were asked:

Does anyone including staff, board members or members from your organization serve on boards, councils or committees of the Extension Office?

Does anyone from the Extension Office serve on boards, councils or committees of your organization?

Respondents are considered to have passed this item if they answered "yes" to either of these questions.

Component score 6: written agreements

Formalizing an exchange relationship by putting it in writing constitutes the highest level of interorganizational exchange to be considered in this study. Signing a written agreement formally commits the participants to the exchange relationship and increases the probability that they will receive support from each other. Respondents were asked:

Does your unit of this organization have any written agreements with the Extension Office pertaining to specific programs or activities, personnel commitments, client referrals, procedures for working together, or other joint activities?

Respondents are considered to have passed this item if they answered "yes" to the question.

### Joint efforts

Joint efforts between organizations will be a second dependent variable in this study. Joint efforts would appear to be an instance of a coalition as discussed by Thompson and McEwen (1958), whereby two or more organizations combine to pursue a common purpose. Operationalization of this variable was based on the following questions asked of respondents:

Within the last five years has this unit of your organization worked jointly in planning and implementing any specific programs or activities with the Extension Service?

(If yes) Will you please list each joint program in which your two organizations have been involved in the past five years?

The number of joint efforts between the set organization and the Extension Service will be used as the measure of this dependent variable.

### Operationalization of the Independent Variables

#### Domain consensus

It was hypothesized that the extent of domain consensus between a focal organization and a set organization is positively related to the intensity of exchange relations between these organizations. One measure of domain consensus is used in this study. It is based on the extent of agreement between each set organization and the focal organization on the involvement of both organizations in development activities. Thus, this measure includes responses made by directors of the focal agency in addition to those made by respondents from the set organizations. Respondents were given a list of organizations, including their own agency,

which have in the past been concerned with development of various sorts, and were asked:

Which of these organizations do you think should be involved in development?

The closed end responses to evaluate each organization were scored as follows:

- 1 - Definitely should not
- 2 - Probably should not
- 3 - Not sure
- 4 - Probably should
- 5 - Definitely should

The question allows an analysis of the development domain of each set organization and the focal organization as perceived by both organizations. Data used to derive an index of domain consensus between the set organization and the focal organization may be illustrated as follows:

	<u>Self</u>	<u>Other</u>
Set organization	$S_s$	$S_o$
Focal organization	$F_s$	$F_o$

The following steps were taken to arrive at an domain consensus index:

1. Compare each set organization's perception of whether it should be involved in development ( $S_s$ ) with the focal organization's perception of whether that particular set organization should be involved ( $F_o$ ). This provides a measure of the extent of consensus between the two organizations on whether the set organization should be involved in development.

2. Compare each focal organization's perception of whether it should be involved in development ( $F_s$ ) with the set organization's perception of whether the focal organization should be involved ( $S_o$ ). This provides a measure of the extent of consensus between the two organizations



on whether the focal organization should be involved.

3. Compare each set organization's perception of whether it should be involved in development ( $S_s$ ) with the focal organization's perception of whether the focal organization should be involved ( $F_s$ ). This provides a measure of the extent of consensus between the two organizations on whether each believes it should be involved in development.

4. Compare each set organization's perception of whether the focal organization be involved in development ( $S_o$ ) with each focal organization's perception of whether the set organization should be involved ( $F_o$ ). This provides a measure of the extent of consensus between the two organizations on whether each believes the other should be involved.

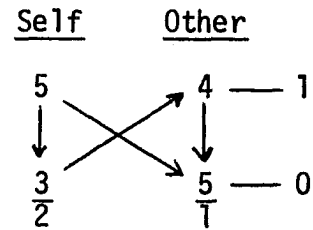
5. Total the scores resulting in the first four steps. Because this score indicates a negative relationship (that is, because a low score indicates high domain consensus), the scores will be transposed according to the following scheme:

<u>Calculated Domain Consensus Score</u>	<u>Transposed Domain Consensus Score</u>
0	16
2	14
4	12
6	10
8	8
10	6
12	4
14	2
16	0

The following example is provided to help explain the calculation of the Domain Consensus Score:

Set organization  
(e.g., Soil Conservation Service)

Focal organization  
(Extension Service)



The five steps are as follows:

1.  $5 - 5 = 0$
2.  $4 - 3 = 1$
3.  $5 - 3 = 2$
4.  $5 - 4 = 1$

5. Combining the component scores derived in the first four steps produces a calculated score of four. Transposing this score utilizing the scheme illustrated above produces a score of 12 for the extent of domain consensus between the Soil Conservation Service and the Cooperative Extension Service in that particular county.

The resulting range of the Domain Consensus Score is 0 - 16. A high score (16 is highest) indicates high consensus between the set organization and the focal organization on the extent of their involvement in development. A low score (0 is lowest) indicates low consensus between the organizations on the extent of their involvement in development.

The first empirical hypotheses may now be stated as follows:

- E. H. 1.1: The Domain Consensus Score is related positively to the Exchange Relations Score.
- E. H. 1.2: The Domain Consensus Score is related positively to the set agency's number of joint efforts with Extension.

### Extent of vertical orientation

It was hypothesized that the extent of vertical orientation of a set organization is negatively related to the intensity of exchange relations between a focal organization and members of its organization set. Two measures of extent of vertical orientation are used in this study. The first is based on the frequency with which programs at the local level are initiated by hierarchal levels of the organization. It is thought that an organization which is strongly vertically oriented will be subject to authority from higher levels in the hierarchy, and that one indicator of this authority would be the frequency with which programs are initiated by these higher levels. Respondents were asked:

How frequently are new programs in your organization initiated by the national level?

How frequently are new programs in your organization initiated by the state level?

How frequently are new programs in your organization initiated by the district or area level?

The responses for each of these questions were scored as follows:

- 1 - Never
- 2 - Seldom
- 3 - Sometimes
- 4 - Frequently

Scores for the responses to each of these three questions were added and the sum was divided by the number of hierarchal levels in the organization to form a Hierarchal Initiation Score. For example, an agency which answered sometimes (3) to the national level, seldom (2) to the state level and never (1) to the district or area level received a score of two. An organization which answered frequently (4) to the national level and seldom (2) to the state level, but which did not have a district or area

level, received a score of three. The next two empirical hypotheses are as follows:

E. H. 2.1: The Hierarchal Initiation Score is related negatively to the Exchange Relations Score.

E. H. 2.2: The Hierarchal Initiation Score is related negatively to the set agency's number of joint efforts with Extension.

The second measure of extent of vertical orientation is closely related to the first. Where the first measure considers the frequency of programs initiated by higher levels of the organization, the second considers the pressure placed on the local level to implement these programs. It was assumed that a considerable degree of pressure could be placed on local levels to implement programs initiated by higher levels in those organizations characterized by a strong vertical orientation.

Respondents were asked:

If a program has been initiated by the national level as a high priority program, how much pressure is put on your level to implement the program?

If a program has been initiated by the state level as a high priority program, how much pressure is put on your level to implement the program?

If a program has been initiated by the district or area level as a high priority program, how much pressure is put on your level to implement the program?

The responses for each of these three questions were scored as follows:

- 1 - No pressure
- 2 - Little pressure
- 3 - Some pressure
- 4 - Great pressure

Scores for the responses to each of these three questions were summed

and then divided by the number of hierarchal levels in the organization which initiate programs. The resulting score is known as the Hierarchal Pressure Score. For example, an agency which answered some pressure (3) to the national level, little pressure (2) to the state level and no pressure (1) to the district or area level received a score of two. An organization which answered great pressure (4) to the national level and little pressure (2) to the state level, but did not have a district or area level, received a score of three. The Hierarchal Pressure Score is incorporated into the empirical hypotheses as follows:

E. H. 2.3: The Hierarchal Pressure Score is related negatively to the Exchange Relations Score.

E. H. 2.4: The Hierarchal Pressure Score is related negatively to the set agency's number of joint efforts with Extension.

### Goal similarity

It was hypothesized that the extent of similarity of goals between a focal organization and a set organization is positively related to the intensity of exchange relations between these organizations. The concept of goals has been a difficult one to operationalize in sociological research. Etzioni (1964:7) distinguishes between stated goals and real goals:

... the real goals of the organization are those future states toward which a majority of the organization's means and the major organizational commitments of the participants are directed, and which, in cases of conflict with goals which are stated but command few resources, have clear priority.

Klonglan and Paulson (1971) note that stated goals are more accessible to

researchers, but may be misleading and are used mainly for public relations purposes. Real goals appear to be closely related to the actual behavior of the organization in terms of resource allocation. Thompson and McEwen (1958) state that an organization's goals determine the goods and services it produces. Thus, the concept of real goals will be used, and will be measured by the services that agency in fact provides.

Agency respondents were asked whether their organization provides each of these different kinds of services: financial assistance, referrals to private and public service agencies, formal educational services, mass media education services, planning assistance, technical assistance, and assistance for attracting new industry. Responses of set organization directors and county Extension directors in each county were considered in scoring this question. One point is scored for each service which is offered by both the set organization and the county Extension office. Scored responses are referred to as the Goal Similarity Score. The next two empirical hypotheses are as follows:

E. H. 3.1: The Goal Similarity Score is related positively to the Exchange Relations Score.

E. H. 3.2: The Goal Similarity Score is related positively to the set agency's number of joint efforts with Extension.

### Organizational prestige

It was hypothesized that the amount of prestige of a focal organization as perceived by a set organization is positively related to the intensity of exchange relations between these organizations. One measure

of organizational prestige is used in this study. It is based on the agency respondent's perception of the prestige of Extension in each county. Respondents were told:

An organization that ranks high on the prestige scale is one that many persons and organizations want very much to be associated with and one which is very well thought of in the community and area in which it works. Please score the Cooperative Extension Service in your county according to its prestige. For our purposes, assume 10 is the highest and one is the lowest score an organization may receive.

The scored responses were referred to as the Perceived Prestige Score.

The next two empirical hypotheses may now be stated.

E. H. 4.1: The Perceived Prestige Score is related positively to the Exchange Relations Score.

E. H. 4.2: The Perceived Prestige Score is related positively to the set agency's number of joint efforts with Extension.

#### Complexity of organizational structure

It was hypothesized that the complexity of organizational structure of a set organization is positively related to the intensity of exchange relations between a focal organization and members of its organization set. The measure of complexity used in this study will consist of one score based on the number of different categories of paid or volunteer positions. Respondents were asked the following questions on the pre-interview questionnaire:

Would you please list the paid positions in your organization?

Would you please list the volunteer positions in your organization?

Positions were categorized as top administrator, assistant to the

top administrator, professional staff assistant, secretarial and clerical positions, and skilled and unskilled workers. One point will be scored for each category of position title reported by the respondents. The possible range of this score, known as the Complexity Score, is 1-5. The empirical hypotheses formulated on the basis of this score are as follows:

E. H. 5.1: The Complexity Score is related positively to the  
Exchange Relations Score.

E. H. 5.2: The Complexity Score is related positively to the set  
agency's number of joint efforts with Extension.

### Program innovation

It was hypothesized that the innovativeness of a set organization is positively related to the intensity of exchange relations between a focal organization and members of its organization set. One measure of innovativeness is used in this study. It is based on the number of programs or services offered by each set organization within the past five years.

Respondents were asked the following questions:

Has your organization added any new programs or services during the last five years?

(If yes) Would you please describe the new programs or services added in the last five years?

The responses were scored as follows:

- 0 - No new programs or services
- 1 - One new program or service
- 2 - Two new programs or services
- 3 - Three new programs or services
- 4 - Four or more new programs or services

The scored responses are referred to as the Program Innovation Score.



The empirical hypotheses stated on the basis of this score are as follows:

E. H. 6.1: The Program Innovation Score is related positively to the Exchange Relations Score.

E. H. 6.2: The Program Innovation Score is related positively to the set agency's number of joint efforts with Extension.

#### Perceived benefit of interaction

It was hypothesized that the benefit of interaction as perceived by a set organization is positively related to the intensity of exchange relations between a focal organization and members of its organization set. One measure of perceived benefit of interaction is used in this study. It is based on the respondent's perception of his organization's relationship with the Extension Office, as it affects his agency's goal attainment.

Respondents were asked the following question:

In terms of the goals your organization is attempting to achieve, would you say your organization's relationship with the Extension Office represents a benefit or cost to your organization?

Responses were scored as follows:

- 1 - Very costly
- 2 - Costly
- 3 - Neither
- 4 - Beneficial
- 5 - Very beneficial

This score, called the Perceived Benefit Score, is the basis for the next two empirical hypotheses to be stated:

E. H. 7.1: The Perceived Benefit Score is related positively to the Exchange Relations Score.

E. H. 7.2: The Perceived Benefit Score is related positively to the set agency's number of joint efforts with Extension.

### Size of resource base

It was hypothesized that a set organization's size of resource base is positively related to the intensity of exchange relations between a focal organization and members of its organization set. Resources included such elements as facilities, specialized knowledge, funds, clients and personnel. Two measures of size of resource base will be utilized in this study. The first will consist of the total expenditures of the set organization during the most recently completed calendar or fiscal year of its operation. Respondents were asked the following question on the pre-interview questionnaire:

Approximately how much were your organization's total expenditures for your last calendar or fiscal year?

The empirical hypotheses to be tested are as follows:

- E. H. 8.1: The set agency's total expenditures for the most recently completed calendar or fiscal year are related positively to the Exchange Relations Score.
- E. H. 8.2: The set agency's total expenditures for the most recently completed calendar or fiscal year are related positively to the set agency's number of joint efforts with Extension.

The second indicator of resource base is the total number of staff members. It is thought that an agency with a large number of employees is better able to reassign staff to facilitate interorganizational relations than an agency with fewer staff members.

Agency respondents were asked to list all volunteer and paid staff positions and the number of persons who worked in each position in the pre-interview questionnaire. The following empirical hypotheses may now

be stated:

E. H. 8.3: The set agency's number of staff members is related positively to the Exchange Relations Score.

E. H. 8.4: The set agency's number of staff members is related positively to the set agency's number of joint efforts with Extension.

#### Operationalization of the Control Variables

Two of the control variables, domain consensus and goal similarity, will be operationalized as discussed in the previous section. Membership in an interagency system will be measured by the set organization's involvement in the Rural Development Committee. Respondents were asked:

Are you presently a member of your county Rural Development Committee, or do you participate but are not a member?

The responses to this question were scored as follows:

- 1 - No
- 2 - Am a member, or participate but am not a member.

#### Hypothesis Evaluation Procedures

Correlation analysis will be used in the next chapter to test the empirical hypotheses. Correlation coefficients describe the degree of relation between two or more variables. They not only allow the researcher to measure the direction of the relationship between two variables (i.e., positive or negative) but also permit comparison of the strength of one relationship to that of another. Product moment correlation coefficients will be used to test the bi-variate relationships stated in the empirical hypotheses. Partial correlation coefficients will be used to test the bivariate relationships controlling for the effect of selected control

variables. The level of probability which will be considered as an acceptable indication of a statistically significant relationship for the correlation analysis is the .05 level of probability.

## CHAPTER 4. EVALUATION AND DISCUSSION OF HYPOTHESES

Two dependent variables -- the Exchange Relations Score and the number of joint efforts -- and a number of independent variables were discussed in the second chapter of this study and stated in the form of general hypotheses. In the third chapter, measures designed to operationalize these variables were developed as a basis for the statement of the empirical hypotheses. These empirical hypotheses will be subjected to empirical evaluation in this chapter. The general format which will be followed in this chapter will be to (1) restate each general hypothesis and the empirical hypotheses related to it; (2) report the results of the relevant statistical test of the data related to each empirical hypothesis; (3) report the results of statistical tests of the empirical hypotheses controlling for selected key variables; and (4) interpret the results of the tests of each of the empirical hypotheses. Before examining the hypotheses, however, a brief discussion of the dependent variables will be presented.

### Dependent Variables

#### The Exchange Relations Score

The first dependent variable to be discussed is the Exchange Relations Score which consists of a Guttman scale of six items designed to measure various aspects of interorganizational exchange. These items are: (1) director acquaintance; (2) director interaction; (3) information exchange; (4) resource exchange; (5) overlapping boards and councils; and (6) written agreements. If these items formed a perfect Guttman scale, all responses

would conform to an ideal pattern as indicated in Figure 4.1. All respondents who passed only one item would pass the "Director Acquaintance" item and no others. Respondents passing two items would always pass the "Director Acquaintance" and the "Director Interaction" items and no others.

Scale type	Acquaintance	Interaction	Information Exchange	Resource Exchange	Overlapping boards	Written agreements
6	Pass	Pass	Pass	Pass	Pass	Pass
5	Pass	Pass	Pass	Pass	Pass	Fail
4	Pass	Pass	Pass	Pass	Fail	Fail
3	Pass	Pass	Pass	Fail	Fail	Fail
2	Pass	Pass	Fail	Fail	Fail	Fail
1	Pass	Fail	Fail	Fail	Fail	Fail
0	Fail	Fail	Fail	Fail	Fail	Fail

Figure 4.1. Ideal pattern of responses to the Guttman scale of Exchange Relations

A respondent who passed a more difficult item would never fail a less difficult one. However, data rarely perfectly fit this ideal pattern. But the degree to which the data fit the ideal model may be determined by scalability tests. An error is counted for each single deviation from the ideal pattern. Standardized coefficients produced from these errors determine whether the items constitute a Guttman scale. The coefficient of reproducibility, the primary criterion of scalability, according to Torgerson (1958), measures the extent to which a score predicts a respondent's response pattern. In general, a coefficient of reproducibility of

at least .90 is considered to indicate a valid scale. A coefficient of reproducibility of .90 was obtained for the items which constitute the Exchange Relations Score in this study. The coefficient of scalability represents the maximum extent to which the coefficient of reproducibility is due to response patterns rather than to the inherent cumulative interrelation of the items used. In the case of the Exchange Relations Scale, the coefficient of scalability was found to be .50, which is considered acceptable. The minimum marginal reproducibility of the scale, which indicates the minimum coefficient of reproducibility that could have occurred for the scale given the cutting points used and the proportion of respondents passing and failing each of the items, was .80. The difference between this figure and the coefficient of reproducibility is considered as additional evidence that the items as ordered in the Exchange Relations Scale represent a deterministic scale of interorganizational exchange. The Exchange Relations Scale also passes the following auxiliary criteria suggested by Torgerson (1958:324) as checks to insure that the value of the coefficient of reproducibility is not spuriously high:

The Pattern of Errors. The pattern of errors should be "random." Practically, this means that no large number of subjects should be found who all have the same nonscale pattern of responses.

Improvement. Each item category should have more non-error than error.

Of the 153 respondents in the study, only 36 were found to have nonscale patterns of responses. These patterns were found to be randomly distributed. That is, no nonscale patterns were found to occur repeatedly. A total of 80 errors were found in the entire scale, with no more than

22 occurring on any one item. No one item category had more error than nonerror.

On the basis of the above considerations, it is concluded that the six components discussed in this section do constitute a deterministic scale of exchange relations. This finding adds support for the notion that there is a single underlying dimension in interorganizational behavior and that various components may be empirically ordered along a continuum ranging from low to high levels of involvement. The items considered in this study may be placed on a continuum ranging from "Director Acquaintance" at the lowest level to "Written Agreements" at the highest level. These components are consistent with Thompson and McEwen's (1958) concepts of bargaining, cooptation and coalition, which describe varying levels of environmental control over organizational goal-setting decisions. An organization may be expected to pass through each of these six levels in order as it initiates exchange relations with another organization and as these relations become more intensified. For example, the director of one organization would be expected to become acquainted with a second organization's director before higher levels of interaction may be initiated; i.e., interacting with the director on a professional level, exchanging information through mailing lists, etc. If two organizations exchanged resources such as meeting rooms, personnel, equipment, etc. during the previous two years, it would be expected that the directors would have become personally acquainted, interacted concerning the activities of their respective organizations, and exchanged information by placing each other on a mailing list. If these organizations signed a written agreement pertaining to personnel commitments or other joint



activities, it would be expected that they would have first passed through each of the lower levels of interorganizational exchange delineated in the Exchange Relations Scale.

A comprehensive measure tapping these various levels utilizes more information than the single item measures on which many of the empirical studies of interorganizational relations have been based. Multiple item measures of this type would aid in the development of a deterministic model based on a single underlying dimension of interorganizational behavior. Such a model should prove useful in identifying the current level of cooperative relations between organizations. Klonglan et al. (1972) points out that one of the assumptions about interorganizational relations is that organizations prefer low level involvement and will engage in higher levels only after lower levels have failed to fulfill resource needs. A deterministic model also would be helpful in guiding organizations through successive stages of interorganizational involvement.

#### Scoring the Exchange Relations Scale

The scoring system used for the scale was to count the number of items which each respondent successfully passed. This score is known as the Exchange Relations Score. The Mean Exchange Relations Score was 3.01; standard deviation was 1.59. Seventeen organizations reported no exchange relations with the Extension Service and therefore passed none of the scale items. Fourteen organizations passed one item, fifteen passed two items, thirty-eight passed three items, forty-four passed four items, twenty-one passed five items, and four passed all six items. All distributions of the Exchange Relations Score presented in the present chapter

will be based on this categorization. The distribution of Exchange Relations Scores by study organizations are presented in Table 4.1. Mean scores are calculated by multiplying the Exchange Relations Score by the frequency of units in that category and then dividing by the number of organizations of each type.

### Joint efforts

The second dependent variable to be discussed is the number of joint efforts between the Extension Service and the set organizations. It was intended to use this variable as a component of the Guttman-type Exchange Relations Score discussed in the last section. However, inclusion of this variable with the other six components resulted in a coefficient of reproducibility of .87 and a coefficient of scalability of .40. Both of these figures were considered unacceptable for a valid Guttman-type scale. "Joint Efforts" would appear to be an instance of a coalition as discussed by Thompson and McEwen (1958). Theoretically, then, this item should have been one of the most difficult scale items to pass. Examination of the data, however, revealed that it was the fourth easiest to pass, and therefore easier than "Resource Exchange," considered an example of bargaining, and "Overlapping Boards," an example of cooptation. Thus, it was decided to drop "Joint Efforts" from the Exchange Relations Score, but to utilize it as a second dependent variable to be tested against the independent variables discussed in the last chapter.

Only 88 of the 153 study organizations reported joint efforts with Extension. The range of scores was 0 to 6, with a mean of 1.01 and a standard deviation of 1.18. The distribution of the number of joint

Table 4.1. Distribution of Exchange Relations Scores by study organizations

Organization	Exchange Relations Score categories							Total organizations	Mean Exchange Relations Score
	0	1	2	3	4	5	6		
Soil Conservation Service	-	-	1	1	4	7	3	16	4.62
Farm Bureau	-	-	1	2	7	6	-	16	4.12
Agricultural Stabilization and Conservation Service	-	-	1	5	7	2	1	16	3.81
Farmers Home Administration	-	-	1	3	8	2	-	14	3.78
Community Action Agency	-	-	-	3	2	1	-	6	3.86
Social Welfare	1	1	2	6	5	1	-	16	3.00
Employment Security Office	1	-	1	4	2	-	-	8	2.75
Forest Service	1	-	-	3	1	-	-	5	2.60
Rural Electric Cooperatives	3	1	-	2	1	2	-	9	2.33
Ministerial Association	-	2	1	2	1	-	-	6	2.33
Industrial Development Groups	2	4	-	3	4	-	-	13	2.23
Conservation Boards	2	2	6	1	2	-	-	13	1.92
Bankers Associations	3	4	1	1	-	-	-	9	1.00
Zoning Commissions	4	-	-	2	-	-	-	6	1.00
Total	17	14	15	38	44	21	4	153	3.01

efforts by study organizations is presented in Table 4.2.

The Soil Conservation Service, the Agricultural Stabilization and Conservation Service, and the Farmers Home Administration--all United States Department of Agriculture agencies--ranked in the top four in both the Exchange Relations Score and the number of joint efforts. This pattern would be expected in view of the systemic relatedness of these agencies to the Cooperative Extension Service, also a USDA agency, and to the physical proximity of their offices in some counties. The Soil Conservation Service had the highest mean Exchange Relations Score and was second in average number of joint efforts. The Community Action Agency--fifth in the Exchange Relations Score--ranked first in the number of joint efforts. Many of these joint programs are projects involving low income audiences in which Community Action Agencies cooperate with Extension homemakers. The Farm Bureau ranked second on the Exchange Relations Score, due probably to its historical association with the Extension Service, but only ninth in the number of joint efforts. The Forest Service ranked eighth in the Exchange Relations Score and fifth in the number of joint efforts. The other study agencies either ranked the same on both dependent variables or varied by no more than two ranks.

#### A Tabular Summary of Findings

A tabular summary of the results of the tests of each of the empirical hypotheses is presented in Table 4.3. The purpose of this table is to provide a concise overview of the statistical findings. Hypotheses are accepted if the correlation coefficients are significant in the hypothesized direction at the .05 level of probability. Six of the ten empirical

Table 4.2. Distribution of number of joint efforts by organizations

Organization	Number of Joint efforts						Total organizations	Mean number of Joint efforts
	0	1	2	3	4	5		
Community Action Agency	-	3	1	1	-	1	6	2.17
Soil Conservation Service	2	5	4	3	1	1	16	1.93
Farmers Home Administration	3	4	4	2	1	-	14	1.57
Agricultural Stabilization and Conservation Service	4	7	3	-	2	-	16	1.31
Forest Service	2	2	-	-	1	-	5	1.20
Social Welfare	4	8	3	1	-	-	16	1.06
Rural Electric Cooperatives	5	1	2	-	1	-	9	1.00
Employment Security Office	5	1	1	-	1	-	8	.88
Farm Bureau	5	9	1	1	-	-	16	.87
Conservation Board	9	2	2	-	-	-	13	.46
Industrial Development Groups	9	3	1	-	-	-	13	.38
Zoning Commissions	5	1	-	-	-	-	6	.16
Ministerial Associations	4	2	-	-	-	-	6	.33
Bankers Associations	8	1	-	-	-	-	9	.11
Total	65	49	22	8	7	2	153	1.01

Table 4.3. Tabular summary of findings for empirical hypotheses

Variable and empirical measure	Direction hypothesized	With Exchange Relations Score		With Number of Joint Efforts	
		Correlation coefficient	Results of hypothesis test	Correlation coefficient	Results of hypothesis test
<u>Variable 1: Domain Consensus</u>					
E. H. 1.1: Domain Consensus Score	positive	.219*	accepted	.156*	accepted
<u>Variable 2: Extent of vertical orientation</u>					
E. H. 2.1: Hierarchal Initia- tion Score	negative	.301*	not accepted	.219*	not accepted
E. H. 2.2: Hierarchal Pres- sure Score	negative	.272*	not accepted	.081	not accepted
<u>Variable 3: Goal Similarity</u>					
E. H. 2.1: Goal Similarity Score	positive	.486*	accepted	.397*	accepted
<u>Variable 4: Organizational Prestige</u>					
E. H. 4.1: Perceived Pres- tige Score	positive	.257*	accepted	.177*	accepted
<u>Variable 5: Organizational Complexity</u>					
E. H. 5.1: Complexity Score	positive	.221*	accepted	.195*	accepted

\*Indicates relationship significant at .05 level of probability.

Table 4.3. (Continued)

Variable and empirical measure	Direction hypothesized	With Exchange Relations Score		With Number of Joint Efforts	
		Correlation coefficient	Results of hypothesis test	Correlation coefficient	Results of hypothesis test
<u>Variable 6: Innovativeness</u>					
E. H. 6.1: Program Innovation Score	positive	.335*	accepted	.287*	accepted
<u>Variable 7: Perceived Benefit of Interaction</u>					
E. H. 7.1: Perceived Benefit Score	positive	.294*	accepted	.302*	accepted
<u>Variable 8: Size of Resource Base</u>					
E. H. 8.1: Total expenditures	positive	.068	not accepted	.088	not accepted
E. H. 8.2: Number of staff members	positive	.092	not accepted	-.012	not accepted

hypotheses were accepted when utilizing the Exchange Relations Score as the dependent variable. The same six were accepted when utilizing the number of joint efforts as the dependent variable. The twelve supported empirical hypotheses provide support for six of the eight general hypotheses.

### Statements and Tests of General and Empirical Hypotheses

#### Domain consensus

General Hypothesis 1      The extent of domain consensus between a focal organization and a set organization is positively related to the intensity of exchange relations between these organizations.

Empirical Hypothesis 1.1      The Domain Consensus Score is related positively to the Exchange Relations Score. The correlation coefficient ( $r=.219$ ) reveals that the hypothesis is supported (Table 4.4). The distribution of the Domain Consensus Score in relation to the Exchange Relations Score is reported in Table 4.5. The Domain Consensus Score is related to the Exchange Relations Score when controlling for goal similarity, but the relationship is not significant when controlling for membership in an interagency system.

Empirical Hypothesis 1.2      The Domain Consensus Score is related positively to the set agency's number of joint efforts with Extension. The correlation coefficient ( $r=.156$ ) reveals that the hypothesis is supported (Table 4.4). Since both empirical hypotheses are supported, it is concluded that the general hypothesis also is supported. Thus, the extent of domain consensus between a focal organization and a set organization appears to be related to the intensity of exchange relations between these



Table 4.4. Correlation coefficients and partial correlation coefficients showing the relationship between the Domain Consensus Score, the Exchange Relations Score, and the number of joint efforts

	Zero-order with Exchange Relations Score	Controlling for membership in an interagency system	Controlling for goal similarity	Zero-order with number of joint efforts
Domain Consensus Score	.219*	.084	.194*	.156*

\* Indicates relationship significant at .05 level of probability.

Table 4.5. Distribution of Exchange Relations Scores by Domain Consensus Scores

Domain Consensus Score	Exchange Relations Score categories							Total organizations
	0	1	2	3	4	5	6	
6	1	-	-	-	-	-	-	1
8	-	-	-	-	-	-	-	-
10	-	2	2	1	2	1	-	8
12	2	2	1	7	8	2	1	23
14	13	9	5	17	16	9	-	69
16	1	-	6	13	17	9	3	49
No answer	-	1	1	-	1	-	-	3
Total organizations	17	14	15	38	44	21	4	153

Domain Consensus Score: Mean = 14.08 Standard deviation = 1.79

organizations. This relationship is only moderately reduced when controlling for goal similarity. This shows that the relationship between domain consensus and exchange relations is not simply a function of goal similarity. However, the relationship is reduced below the significance level when controlling for membership in an interagency system. Partial correlation analysis also was used to test the relationship between domain consensus and number of joint efforts between the set agency and Extension, controlling for membership in an interagency system. The relationship is not significant ( $r=.036$ ). On the basis of these findings, it is concluded that the relationship between domain consensus and interorganizational exchange depends on membership in an interagency system. It is unlikely that Rural Development Committee membership acts as an intervening variable between domain consensus and interorganizational exchange. This is because of the 51 organizations which were members or participated in the Rural Development Committee, 42 were directed to do so. The explanation of Rural Development Committee membership as an intervening variable is plausible, however, for the nine non-USDA agencies which accepted invitations to join the committees. One could argue that organizations were invited to join the committees because they have high consensus with the Extension Service on their involvement in development activities. Membership in the committee, in turn, would lead to a higher degree of interorganizational exchange with Extension.

Domain consensus was positively correlated with membership in an interagency system ( $r=.343$ ). This might be expected in that 42 of the Rural Development Committee members were directed to form committees. It would be expected that these agencies would have a high degree of consensus with

regard to what each will and will not do in the area of development. This, in turn, would provide an image of each other's role in the operation of the committee. Accepting each other's domain, in effect, provides the legitimation necessary to allow the agencies to function in an exchange relationship through the Rural Development Committee. One might hypothesize that domain consensus between committee members is positively related to the extent of participation in committee activities. The data shows that domain consensus was positively correlated with the number of Rural Development Committee meetings attended in 1970 ( $r=.332$ ).

#### Extent of vertical orientation

General Hypothesis 2      The extent of vertical orientation of a set organization is negatively related to the intensity of exchange relations between a focal organization and members of its organization set.

Empirical Hypothesis 2.1      The Hierarchal Initiation Score is related negatively to the Exchange Relations Score. The correlation coefficient ( $r=.301$ ) reveals not only that the hypothesis is not supported, but that the relationship is significant in the opposite direction; that is, the Hierarchal Initiation Score is positively related to the Exchange Relations Score (Table 4.6). The distribution of these scores is reported in Table 4.7. The Hierarchal Initiation Score is positively related to the Exchange Relations Score when controlling for goal similarity, domain consensus and membership in an interagency system.

Empirical Hypothesis 2.2      The Hierarchal Initiation Score is related negatively to the set agency's number of joint efforts with Extension. The correlation coefficient ( $r=.219$ ) reveals not only that the

Table 4.6. Correlation coefficients and partial correlation coefficients showing the relationship between the Hierarchal Initiation Score, the Exchange Relations Score, and the number of joint efforts

	Zero-order with Exchange Relations Score	Controlling for domain consensus	Controlling for membership in an interagency system	Controlling for goal similarity	Zero-order with number of joint efforts
Hierarchal Initiation Score	.301*	.294*	.258*	.165*	.219*

\* Indicates relationship significant at .05 level of probability.

Table 4.7. Distribution of Exchange Relations Scores by Hierarchal Initiation Scores

Hierarchal Initiation Score	Exchange Relations Score categories							Total organizations
	0	1	2	3	4	5	6	
0-1.00	4	4	3	4	2	2	-	19
1.01-2.00	2	4	4	5	9	4	-	28
2.01-3.00	7	2	4	18	16	12	1	60
3.01-4.00	1	1	2	10	16	3	3	36
No answer	<u>3</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>10</u>
Total organizations	17	14	15	38	44	21	4	153

Hierarchal Initiation Score: Mean = 2.83 Standard deviation = 0.71

hypotheses is not supported, but that the relationship is significant in the opposite direction; that is, the Hierarchal Initiation Score is positively related to the set agency's number of joint efforts with Extension.

Empirical Hypothesis 2.3      The Hierarchal Pressure Score is negatively related to the Exchange Relations Score. The correlation coefficient ( $r=.272$ ) reveals not only that the hypothesis is not supported, but that the relationship is significant in the direction opposite to that hypothesized; that is, the Hierarchal Pressure Score is positively related to the Exchange Relations Score (Table 4.8). The distribution of these scores is reported in Table 4.9. These scores are significantly related in a positive direction when controlling for goal similarity, domain consensus and membership in an interagency system.

Empirical Hypothesis 2.4      The Hierarchal Pressure Score is related negatively to the set agency's number of joint efforts with Extension. The correlation coefficient ( $r=.081$ ) reveals not only that the hypothesis is not supported, but that the direction of the relationship is opposite to that hypothesized; that is, the Hierarchal Pressure Score is positively related to the set agency's number of joint efforts with Extension.

Since none of the four empirical hypotheses were supported, it is concluded that the two general hypotheses are not supported. The measures of extent of vertical orientation were found to be significantly related to the Exchange Relations Score in a positive direction when controlling for domain consensus and interagency system membership. This indicates that hierarchal program initiation and hierarchal pressure have independent relations with interorganizational exchange, and are not merely a function

Table 4.8. Correlation coefficients and partial correlation coefficients showing the relationship between the Hierarchal Pressure Score, the Exchange Relations Score, and the number of joint efforts

	Zero-order with Exchange Relations Score	Controlling for domain consensus	Controlling for membership in an interagency system	Controlling for goal similarity	Zero-order with number of joint efforts
Hierarchal Pressure Score	.272*	.256*	.193*	.329*	.081

\*Indicates relationship significant at .05 level of probability.

Table 4.9. Distribution of Exchange Relations Scores by Hierarchal Pressure Scores

Hierarchal Pressure Score	Exchange Relations Score categories							Total organizations
	0	1	2	3	4	5	6	
0-1.00	5	-	1	2	5	-	-	13
1.01-2.00	1	3	2	6	6	1	-	19
2.01-3.00	2	4	5	14	12	12	2	51
3.01-4.00	1	-	3	11	18	6	1	40
No answer	<u>8</u>	<u>7</u>	<u>4</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>30</u>
Total organizations	17	14	15	38	44	21	4	153

Hierarchal Pressure Score: Mean = 2.84 Standard deviation = 0.92

of the control variables. However, the relationship between hierarchal program initiation and exchange relations ( $r=.301$ ) was reduced by almost one-half when controlling for goal similarity ( $r=.165$ ). A moderately strong relationship was found between goal similarity and hierarchal program initiation ( $r=.339$ ). It was concluded that the relationship between hierarchal program initiation and interorganizational exchange was significant, but that part of this relationship depends on goal similarity. This suggests that vertically-oriented organizations which are directed to interact at the local level may have higher levels of interaction with organizations with which they share common goals.

Inasmuch as the variables measuring extent of vertical orientation were found to be significantly related in a direction opposite to that hypothesized, it is of interest to explore the question of why. It was argued that vertical ties of local organizations to extra-community systems are becoming stronger, and as a result decisions of local groups regarding community projects and efforts are determined by higher-level authorities. It was felt that higher administrative levels are more oriented to vertical or intraorganizational coordination than to horizontal or interorganizational coordination at the community level. Vertically-oriented organizations were thought to be less dependent on the environment for resources because of the possibility of support from within the extra-community system.

One of the assumptions underlying the conceptualization of interorganizational relations as exchange transactions was that organizations are involved in input-output transactions. Organizations were conceived as dependent on their environment for inputs (resources) which they convert

into outputs. However, Warren (1963:268) maintains that the behavior of vertically-oriented local organizations cannot be explained without reference to interaction at the community level, and that "no local unit, no matter how strongly integrated to an extra-community system, can function long in complete disregard for the impact which its own behavior makes on other units in the locality." He notes (1963:293) that the following elements are included in input-output transactions between community organizations:

The services which constitute the "production" of other units in the locality ... A variety of services more specifically related to the actual operation of the unit ... A labor force ... Capital and operating funds ... Cultural traits from the locality ... Social pressure of various types ... Good will ... Impacts caused by the action of other units.

It may be that the strength of these input-output processes has been underestimated, and that these transactions outweigh the extent of vertical orientation as measured in this study as factors which explain the extent of interagency interaction. Viewed in these terms, the interaction of organizations at the community level may be seen as constituting a social system. Interplay between both the vertical and horizontal systems in the form of input-output processes may be necessary in explaining the behavior of organizations at the community level.

It is worthwhile to recall at this point that frequency of programs initiated by higher administrative levels and pressure to implement these programs were used as measures of vertical orientation. No emphasis was placed on the content of these programs. Mulford and Klonglan (1972) have noted that the federal government is encouraging interagency



coordination by tying federal dollars to these criteria for participation at the state and local level. The USDA is encouraging and in fact directing its agencies to cooperate in Rural Development Committee activities. The "strain" toward interagency coordination is being felt in the state government as well. Thus, analysis of the content of programs initiated by the higher administrative levels of vertically-oriented organizations may help explain the horizontal coordination on the part of lower level units.

Another explanation may lie in the dynamics of the development process itself. Warren (1963:323) defines community development as a deliberate attempt to strengthen the horizontal pattern of the community, " ... rather than leaving it to the operation of the interactional 'market.'" While the concept of rural development encompasses much more than Warren's "community development," the latter may be considered an integral part of the broader concept. In particular, Extension's role in the development process would appear to be quite consistent with Warren's definition of the community development process.

### Goal similarity

General Hypothesis 3      The extent of similarity of goals between a focal organization and a set organization is positively related to the intensity of exchange relations between these organizations.

Empirical Hypothesis 3.1      The Goal Similarity Score is related positively to the Exchange Relations Score. The correlation coefficient ( $r=.486$ ) reveals that the hypothesis is supported (Table 4.10). The distribution of the Goal Similarity Score in relation to the Exchange

Table 4.10. Correlation coefficients and partial correlation coefficients showing the relationship between the Goal Similarity Score, the Exchange Relations Score and the number of joint efforts

	Zero-order with Exchange Relations Score	Controlling for domain consensus	Controlling for membership in an interagency system	Zero-order with number of joint efforts
Goal Similarity Score	.486*	.477*	.440*	.397*

\* Indicates relationship significant at .05 level of probability.

Table 4.11. Distribution of Exchange Relations Scores by Goal Similarity Scores

Goal Similarity Score	Exchange Relations Score categories							Total organizations
	0	1	2	3	4	5	6	
0	6	3	2	1	1	-	-	13
1	4	2	3	6	4	2	-	21
2	3	5	3	7	9	2	-	29
3	4	2	4	13	8	6	2	39
4	-	2	3	8	13	8	-	34
5	-	-	-	3	6	3	1	13
6	-	-	-	-	3	-	1	4
Total organizations	17	14	15	38	44	21	4	153

Goal Similarity Score: Mean = 2.75 Standard deviation = 1.50

Relations Score is reported in Table 4.11. The Goal Similarity Score is positively related to the Exchange Relations Score when controlling for domain consensus and membership in an interagency system.

Empirical Hypothesis 3.2 The Goal Similarity Score is related positively to the set agency's number of joint efforts with Extension. The correlation coefficient ( $r=.397$ ) reveals that the hypothesis is supported.

Since both empirical hypotheses are supported, it is concluded that the general hypothesis also is supported. Thus, the extent of similarity of goals appears to be related to the intensity of interorganizational relations between a focal organization and members of its organization set. Controlling for domain consensus and interagency system membership appears to make little difference in the relationship.

Although the correlation between the Goal Similarity Score and the number of joint efforts is significant, the relationship is not as strong as between the Goal Similarity Score and the Exchange Relations Score. However, it is interesting to note that the Goal Similarity Score has the highest correlation with both the dependent variables than any of the other independent variables considered in the study.

It is important to recall at this time that the concept of goals was measured in this study by the services that an agency in fact provides. Thus, it is a measure of "real goals" which Etzioni (1964) differentiates from "stated goals." The sharing of "real goals" would appear to be a more important force for interagency coordination than the sharing of "stated goals." The latter, which appear in official declarations of purpose, may be unrelated to the "real goals" to which the organization's resources are directed. For example, Extension and the Salvation Army may share a

"stated goal" of improving the diets of low income persons who reside in the county. Extension may view this goal primarily in terms of the Expanded Nutrition Program with homemakers and youth. The Salvation Army may interpret it as the distribution of food to the needy. Much of this consensus may dissolve at the level of "real goals," resulting in little basis for coordination. However, Extension and a rural electric cooperative may share a "real goal" of providing assistance for attracting new industry into the community. Sharing this goal at the operational level would offer greater opportunity for interagency coordination.

Goals become more meaningful in the study of interorganizational relations when related to organizational resources. While shared goals may be a necessary condition for interorganizational exchange, the author agrees with Reid (1965) that it is not a sufficient condition. Exchange would appear to be more likely between organizations which not only share common goals, but have resources which are complementary in terms of goal attainment. A condition of insufficient resources also could hinder goal attainment between organizations which share common goals.

### Organizational prestige

General Hypothesis 4      The amount of prestige of a focal organization as perceived by a set organization is positively related to the intensity of exchange relations between these organizations.

Empirical Hypothesis 4.1      The Perceived Prestige Score is related positively to the Exchange Relations Score. The correlation coefficient ( $r=.257$ ) reveals that the hypothesis is supported (Table 4.12). The distribution of the Perceived Prestige Score in relation to the Exchange

Table 4.12. Correlation coefficients and partial correlation coefficients showing the relationship between the Perceived Prestige Score, the Exchange Relations Score, and the number of joint efforts

	Zero-order with Exchange Relations Score	Controlling for domain consensus	Controlling for membership in an interagency system	Controlling for goal similarity	Zero-order with number of joint efforts
Perceived Prestige Score	.257*	.236*	.222*	.235*	.177*

\*Indicates relationship significant at .05 level of probability.

Table 4.13. Distribution of Exchange Relations Scores by Perceived Prestige Scores

Perceived Prestige Score	Exchange Relations Score categories							Total organizations
	0	1	2	3	4	5	6	
4	-	3	-	-	2	-	-	5
5	1	3	-	7	2	-	-	13
6	1	2	1	6	4	-	-	14
7	2	2	3	4	7	7	1	26
8	3	2	8	12	11	9	2	47
9	-	1	1	5	13	4	-	24
10	-	1	2	3	5	1	1	13
No answer	<u>10</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>11</u>
Total organizations	17	14	15	38	44	21	4	153

Perceived Prestige Score: Mean = 7.55 Standard deviation = 1.52

Relations Score is reported in Table 4.13. The Perceived Prestige Score is positively related to the Exchange Relations Score when controlling for goal similarity, domain consensus and membership in an interagency system.

Empirical Hypothesis 4.2      The Perceived Prestige Score is related positively to the set agency's number of joint efforts with Extension. The correlation coefficient ( $r=.177$ ) reveals that the hypothesis is supported.

Since both empirical hypotheses are supported, it is concluded that the general hypothesis also is supported. Thus, the prestige of the focal organization as perceived by the set organization appears to be related to the intensity of interorganizational relationship between the organizations. Controlling for goal similarity, domain consensus and Rural Development Committee membership appears to make little difference in the relationship.

Although the correlation between the Perceived Prestige Score and the number of joint efforts is significant, the relationship is not as strong as between the Perceived Prestige Score and the Exchange Relations Score.

The findings add support for the notion that perceived prestige of the potential interaction partner would appear to be a motivating factor in involvement in relations between organizations engaged in rural development activities. Apparently an agency which is well thought of by other organizations in its environment also is considered to be a more attractive potential interaction partner by these organizations. It is not surprising that prestige is highly correlated with perceived benefit of interaction ( $r=.457$ ). One would expect that an organization which views a second organization as prestigious would also perceive that interaction with this

organization would be more of a benefit than a cost. The author would have expected that size of resource base would be a positive factor in establishing an agency's prestige in the community. However, the data do not bear this out, as indicated by the relationships between prestige and annual expenditures ( $r = -.062$ ) and number of staff members ( $r = .064$ ). Little relationship was found between prestige and complexity ( $r = .044$ ). It is entirely possible that the "bureaucratic stigma" which surrounds large, complex organizations distracts from their prestige as perceived by other organizations in the community.

### Organizational complexity

General Hypothesis 5      The complexity of organizational structure of a set organization is positively related to the intensity of exchange relations between a focal organization and members of its organization set.

Empirical Hypothesis 5.1      The Complexity Score is related positively to the Exchange Relations Score. The correlation coefficient ( $r = .221$ ) reveals that the hypothesis is supported (Table 4.14). The distribution of the Complexity Score in relation to the Exchange Relations Score is reported in Table 4.15. The Complexity Score is positively related to the Exchange Relations Score when controlling for domain consensus, membership in an interagency system, and goal similarity.

Empirical Hypothesis 5.2      The Complexity Score is related positively to the set agency's number of joint efforts with Extension. The correlation coefficient ( $r = .195$ ) reveals that the hypothesis is supported.

Since both empirical hypotheses are supported by the data, it is concluded that the general hypothesis also is supported. Controlling

Table 4.14. Correlation coefficients and partial correlation coefficients showing the relationship between the Complexity Score, the Exchange Relations Score, and the number of joint efforts

	Zero-order with Exchange Relations Score	Controlling for domain consensus	Controlling for membership in an interagency system	Controlling for goal similarity	Zero-order with number of joint efforts
Complexity Score	.221*	.228*	.211*	.153*	.195*

\*Indicates relationship significant at .05 level of probability.

Table 4.15. Distribution of Exchange Relations Scores by Complexity Scores

Complexity Score	Exchange Relations Score categories							Total organizations
	0	1	2	3	4	5	6	
1	4	-	-	9	3	2	-	18
2	7	9	8	5	6	1	1	37
3	2	2	3	10	20	9	2	48
4	3	3	3	10	14	8	1	42
5	<u>1</u>	<u>-</u>	<u>1</u>	<u>4</u>	<u>1</u>	<u>1</u>	<u>-</u>	<u>8</u>
Total organizations	17	14	15	38	44	21	4	153

Complexity Score: Mean = 2.90 Standard deviation = 1.09



for domain consensus ( $r=.228$ ) and interagency system membership ( $r=.211$ ) strengthens the relationship. This indicates a negative correlation between complexity and each of these control variables.

Aiken and Hage (1968) have hypothesized that organizational complexity stimulates innovation, which in turn increases the need for resources. A partial correlation coefficient was calculated to test the relationship between complexity and interorganizational exchange, controlling for innovativeness. The relationship was not significant ( $r=.130$ ). Complexity was significantly related to innovativeness ( $r=.328$ ) and innovativeness was significantly related to interorganizational exchange ( $r=.335$ ). Thus, it is concluded that innovativeness acts as an intervening variable between complexity and interorganizational exchange. These findings suggest that while complexity is not directly related to interorganizational exchange, it is directly related to program innovation which is related to interorganizational exchange. The latter finding is consistent with Aiken and Hage's formulation. It seems likely that as organizations become more complex, they also become more innovative. This creates a need for additional resources. As this need intensifies, organizations are more likely to engage in exchange relationships with other organizations in order to secure needed resources.

Complexity was found to be related to total expenditures ( $r=.315$ ) and number of staff members ( $r=.433$ ). These latter variables are indicators of size of resource base. These findings are not surprising in that one would expect that an organization with numerous different categories of positions would also have a larger staff to fill these positions, and also would require higher annual expenditures to support a larger staff.

### Program innovation

General Hypothesis 6      The innovativeness of a set organization is positively related to the intensity of exchange relations between a focal organization and members of its organization set.

Empirical Hypothesis 6.1      The Program Innovation Score is related positively to the Exchange Relations Score. The correlation coefficient ( $r=.335$ ) reveals that the hypothesis is supported (Table 4.16). The distribution of the Program Innovation Score in relation to the Exchange Relations Score is reported in Table 4.17. The Program Innovation Score is positively related to the Exchange Relations Score when controlling for goal similarity, domain consensus and membership in an interagency system.

Empirical Hypothesis 6.2      The Program Innovation Score is related positively to the set agency's number of joint efforts with Extension. The correlation coefficient ( $r=.287$ ) reveals that the hypothesis is supported.

Since both empirical hypotheses are supported, it is concluded that the general hypothesis also is supported. Thus, the innovativeness of the set organization appears to be related to the intensity of interorganizational relationships with a focal organization. Controlling for goal similarity apparently makes little difference in the relationship. Controlling for domain consensus ( $r=.354$ ) and interagency system membership ( $r=.405$ ) strengthens the relationship. This indicates a negative relationship between innovativeness and these control variables. These findings indicate that the relationship between innovativeness and interorganizational exchange is an independent relationship and not simply a function of these selected control variables.

Table 4.16. Correlation coefficients and partial correlation coefficients showing the relationship between the Program Innovation Score, the Exchange Relations Score, and the number of joint efforts

	Zero-order with Exchange Relations Score	Controlling for domain consensus	Controlling for membership in an interagency system	Controlling for goal similarity	Zero-order with number of joint efforts
Program Innovation Score	.335*	.354*	.405*	.229*	.287*

\*Indicates relationship significant at .05 level of probability.

Table 4.17. Distribution of Exchange Relations Scores by Program Innovation Scores

Program Innovation Score	Exchange Relations Score categories							Total organizations
	0	1	2	3	4	5	6	
0	13	9	3	11	6	5	1	48
1	3	3	4	14	15	6	-	45
2	-	1	4	8	9	5	2	29
3	1	1	3	4	8	4	1	22
4	-	-	1	1	4	1	-	7
No answer	-	-	-	-	2	-	-	2
Total organizations	17	14	15	38	44	21	4	153

Program Innovation Score: Mean = 1.30 Standard deviation = 1.19

These findings support the notion that innovativeness is a motivating factor in involvement in relations between organizations engaged in rural development activities. Innovativeness is significantly related to organizational complexity ( $r=.328$ ), indicating that these variables work together to heighten interagency cooperation. It seems likely that innovation is a function of organizational complexity. Innovative organizations, in turn, require greater quantities of resources in order to successfully implement their new programs and services. These organizations seek to establish exchange relationships with other agencies in the environment as a means of acquiring the needed resources. Aiken and Hage (1968) tested a similar hypothesis, utilizing "number of joint programs" as the sole indicator of organizational interdependence. While the Program Innovation Score was found to be significantly related to the number of joint efforts in the present study, the relationship was slightly weaker than with the Exchange Relations Score.

One might expect a significant relationship between innovativeness and number of staff members on the basis of the above argument. However, an extremely weak relationship was found between these variables ( $r=.059$ ). Apparently it is not the sheer size of an organization which provides a strain toward innovation, but rather the complexity of the organization as measured, in this case, by the number of different categories of positions.

#### Perceived benefit of interaction

General Hypothesis 7      The benefit of interaction as perceived by a set organization is positively related to the intensity of exchange relations between a focal organization and members of its organization set.

Empirical Hypothesis 7.1      The Perceived Benefit Score is related positively to the Exchange Relations Score. The correlation coefficient ( $r=.294$ ) reveals that the hypothesis is supported (Table 4.18). The distribution of the Perceived Benefit Score in relation to the Exchange Relations Score is reported in Table 4.19. The Perceived Benefit Score is positively related to the Exchange Relations Score when controlling for goal similarity, domain consensus and membership in an interagency system.

Empirical Hypothesis 7.2      The Perceived Benefit Score is related positively to the set agency's number of joint efforts with Extension. The correlation coefficient ( $r=.302$ ) reveals that the hypothesis is supported.

Since both empirical hypotheses are supported, it is concluded that the general hypothesis also is supported. Thus, the benefit of the interaction as perceived by the set organization appears to be related to the intensity of interorganizational relations between a focal organization and members of its organization set. Controlling for goal similarity and domain consensus appears to make little difference in the relationship. The relationship is still significant when controlling for interagency system membership, but this variable accounts for considerably more of the variation between the independent and dependent variables than either of the other two control variables. The relationship among these variables was further investigated by computing the zero-order correlation coefficient between interagency system membership and the Exchange Relations Score. A significant relationship was found ( $r=.432$ ). The relationship was found to be significant when controlling for the Perceived Benefit Score ( $r=.365$ ). The Perceived Benefit Score also was found to be related significantly to membership in an interagency system ( $r=.350$ ). Thus, it appears that the

Table 4.18. Correlation coefficients and partial correlation coefficients showing the relationship between the Perceived Benefit Score, the Exchange Relations Score, and the number of joint efforts

	Zero-order with Exchange Relations Score	Controlling for domain consensus	Controlling for membership in an interagency system	Controlling for goal similarity	Zero-order with number of joint efforts
Perceived Benefit Score	.294*	.262*	.168*	.257*	.302*

\* Indicates relationship significant at .05 level of probability.

Table 4.19. Distribution of Exchange Relations Scores by Perceived Benefit Scores

Perceived Benefit Score	Exchange Relations Score categories							Total organizations
	0	1	2	3	4	5	6	
4	-	3	-	-	2	-	-	5
5	1	3	-	7	2	-	-	13
6	1	2	1	6	4	-	-	14
7	2	2	3	4	7	7	1	26
8	3	2	8	12	11	9	2	47
9	-	1	1	5	13	4	-	24
10	-	1	2	3	5	1	1	13
No answer	10	-	-	1	-	-	-	11
Total organizations	17	14	15	38	44	21	4	153

Perceived Benefit Score: Mean = 4.17 Standard deviation = 0.62

perceived benefit of interaction is significantly related both to the extent of exchange relations between organizations, as well as to inter-agency system membership.

The Perceived Benefit Score has a slightly stronger relationship with the number of joint efforts than with the Exchange Relations Score, although this is the only independent variable in this study where this is the case.

The findings add support for the notion that benefit of the interaction as perceived by the set organization would appear to be a motivating factor in involvement in interactions between organizations engaged in rural development activities. This finding is consistent with the exchange model. A somewhat surprising finding is that perceived benefit of interaction is not significantly related to annual expenditures ( $r=.038$ ), although it is related to the number of staff members ( $r=.180$ ), the other measure of size of resource base used in this study. One would have expected that an organization would consider both these factors when determining whether interaction with a potential partner would represent a cost or a benefit. Other factors which may be important in making this judgment are prestige ( $r=.457$ ), goal similarity ( $r=.146$ ), and domain consensus ( $r=.193$ ).

#### Size of resource base

General Hypothesis 8      A set organization's size of resource base is positively related to the intensity of exchange relations between a focal organization and members of its organization set.

Empirical Hypothesis 8.1      The set agency's total expenditures for the most recently completed calendar or fiscal year are related positively to the Exchange Relations Score. The correlation coefficient ( $r=.068$ )

reveals that the hypothesis is not supported (Table 4.20). The distribution of the total expenditures in relation to the Exchange Relations Score is reported in Table 4.21.

Empirical Hypothesis 8.2 The set agency's total expenditures for the most recently completed calendar or fiscal year are related positively to the set agency's number of joint efforts with Extension. The correlation coefficient ( $r=.008$ ) reveals that the hypothesis is not supported.

Empirical Hypothesis 8.3 The set agency's number of staff members is related positively to the Exchange Relations Score. The correlation coefficient ( $r=.092$ ) reveals that the hypothesis is not supported (Table 4.22). The distribution of the number of staff members in relation to the Exchange Relations Score is reported in Table 4.23.

Empirical Hypothesis 8.4 The set agency's number of staff members is related positively to the set agency's number of joint efforts with Extension. The correlation coefficient ( $r=.012$ ) reveals that the hypothesis is not supported.

Since none of the four empirical hypotheses are supported, it is concluded that the general hypothesis is not supported. Thus, size of resource base appears not to be related to the intensity of interorganizational relations between the focal organization and members of its organization set examined in this study. It is of some interest to explore the question of why. The exchange model assumes that resources are scarce commodities, and that organizations engage in exchange transactions with each other in order to obtain resources necessary for goal attainment. It was argued that a set organization with a large resource base as measured by annual expenditures and number of staff members would be an attractive



Table 4.20. Correlation coefficients and partial correlation coefficients showing the relationship between total expenditures, the Exchange Relations Score, and the number of joint efforts

	Zero-order with Exchange Relations Score	Controlling for domain consensus	Controlling for membership in an interagency system	Controlling for goal similarity	Zero-order with number of joint efforts
Total expenditures	.068	.069	.033	-.070	.088

Table 4.21. Distribution of Exchange Relations Scores by total expenditures

Total expenditures	Exchange Relations Score categories							Total organizations
	0	1	2	3	4	5	6	
Less than \$24,999	10	7	5	12	10	4	-	48
\$25,000-\$49,999	2	2	2	6	7	6	2	27
\$50,000-\$99,999	-	2	4	3	6	2	2	19
\$100,000-\$499,999	1	1	1	3	5	2	-	13
\$500,000 plus	3	0	0	7	8	3	0	21
No answer	<u>1</u>	<u>2</u>	<u>3</u>	<u>7</u>	<u>8</u>	<u>4</u>	<u>0</u>	<u>25</u>
Total organizations	17	14	15	38	44	21	4	153

Total expenditures: Mean = \$177,875.00 Standard deviation = \$296,160.00

Table 4.22. Correlation coefficients and partial correlation coefficients showing the relationship between the number of staff members, the Exchange Relations Score, and the number of joint efforts

	Zero-order with Exchange Relations Score	Controlling for domain consensus	Controlling for membership in an interagency system	Controlling for goal similarity	Zero-order with number of joint efforts
Number of staff members	.092	.094	.042	-.030	-.012

Table 4.23. Distribution of Exchange Relations Scores by number of staff members

Number of staff members	Exchange Relations Score categories							Total organizations
	0	1	2	3	4	5	6	
1-5	10	9	7	15	17	11	3	72
6-10	2	2	4	10	17	4	1	40
11-20	1	2	4	2	2	2	-	13
More than 20	2	-	-	7	7	3	-	19
No answer	<u>2</u>	<u>1</u>	<u>-</u>	<u>4</u>	<u>1</u>	<u>1</u>	<u>-</u>	<u>9</u>
Total organizations	17	14	15	38	44	21	4	153

Number of staff members: Mean = 10.88 Standard deviation = 16.02

target for a focal organization which wishes to engage in interaction for the purpose of exchanging resources. While the set organization may be an attractive target for the focal organization, however, the set organization may perceive that it has little to gain through exchange relations with a focal organization which has fewer resources to offer in return. Thus, the set organization may practice boundary maintenance and choose not to enter into exchange relations with a focal organization which has a smaller resource base. For example, a large organization in which specialized personnel or departments provide the needed spectrum of resources may find it more efficient to develop its own resources for goal attainment than to enter into exchange transactions in order to gain access to these resources. Or the large organization may feel that it already has sufficient resources to attain its goals. A hypothesis based on the above discussion is that organizations with a small resource base initiate more interorganizational exchange relationships than organizations with a larger resource base.

Applying Blau's conceptualization of social power to this situation, one might hypothesize that a large resource base may enable one organization to attain a position of power over organizations with a smaller resource base. The organization with a large resource base may provide benefits to an organization with a smaller resource base. The norm of reciprocity holds that the organization with the smaller resource base is obliged to reciprocate by providing benefits in return. If the latter organization is unable to reciprocate, it may become indebted to the former and express this indebtedness in the form of subordination.

Table 4.24. Correlation coefficients between indicators of the independent variables

	1	2	3	4	5	6	7	8	9	10
1. Domain Consensus	---	.063	.109	.108	.133	-.017	-.045	.193*	.004	.002
2. Hierarchal Initiation		---	.064	.339*	.112	.163*	.108	.267*	.158*	.255*
3. Hierarchal Pressure			---	-.032	.094	.135	.028	.130	.200*	.148
4. Goal Similarity				---	.109	.230*	.297*	.146*	.264*	.241*
5. Prestige					---	.044	.071	.457*	-.062	.064
6. Complexity						---	.328*	.083	.315*	.433*
7. Innovativeness							---	.138	.074	.059
8. Perceived Benefit								---	.038	.180*
9. Total Expenditures									---	.286*
10. Staff Members										---

\* Indicates relationship significant at .05 level of probability.

## Control Variables

### Domain consensus

Controlling for domain consensus did not significantly reduce the zero-order correlations between any of the independent variables and the Exchange Relations Score. That is, those zero-order correlations which were found to be significant were still significant when controlling for domain consensus. In no instances were the partial correlation coefficients more than .032 different than the zero-order correlation coefficients. This shows that the relationship between these independent variables and interorganizational exchange is not simply a function of domain consensus. However, controlling for domain consensus strengthened the relationship between interorganizational exchange and both complexity and innovativeness. Thus, domain consensus had very small inverse relationships with complexity ( $r = -.017$ ) and with innovativeness ( $r = -.045$ ), but each of these is hardly different from zero. Controlling for domain consensus "frees up" the variation between the independent and dependent variables, resulting in a higher correlation coefficient.

### Membership in an interagency system

Membership in the Rural Development Committee was used as an indicator of interagency system membership when controlling for the effect of this variable. Controlling in this manner changed the result of only one of the zero-order correlations. Domain consensus was found to be significantly related to interorganizational exchange ( $r = .219$ ). Controlling for interagency system membership, however, reduced the relationship below the significance level ( $r = .084$ ). It was concluded that the relationship

between domain consensus and interorganizational exchange was a function of interagency system membership.

Perceived benefit of interaction was positively related to interorganizational exchange ( $r=.294$ ). This relationship was still significant when controlling for membership in an interagency system ( $r=.168$ ), but the latter variable accounted for a good deal of the relationship between the independent and dependent variables. One might expect that, because USDA agencies are directed to form Rural Development Committees, perceived benefit of interaction may play a less important role in accounting for the interaction between committee members. Controlling for Rural Development Committee membership strengthened the relationship between interorganizational exchange and the independent variable innovativeness. Rural Development Committee membership had a very small inverse relationship with innovativeness ( $r=-.068$ ), but this relationship is hardly different from zero.

#### Goal similarity

Controlling for goal similarity did not significantly reduce the zero-order correlations between any of the independent variables and the Exchange Relations Score. That is, those zero-order correlations which were found to be significant were still significant when controlling for goal similarity. This shows that the relationship between each of these independent variables and interorganizational exchange does not simply depend on goal similarity. However, controlling for goal similarity strengthened the relationship between interorganizational exchange and hierarchial pressure. Goal similarity was negatively correlated with this

independent variable ( $r=-.032$ ), but this relationship is hardly different from zero.

Hierarchical program initiation was positively related to inter-organizational exchange ( $r=.301$ ). This relationship was still significant when controlling for goal similarity ( $r=.165$ ), but the latter variable accounted for almost half the correlation between the independent and dependent variables. It seems possible that vertically-oriented organizations may be directed to form new programs designed to bring about inter-agency cooperation. But those local organizations with similar goals would be more likely to formulate joint programs on their own initiative than those with dissimilar goals.

#### Additional Findings

Aiken and Hage (1968) have been criticized for their use of "joint efforts between organizations" as the sole indicator of interorganizational relations (Dillman, 1969). However, the results of the present study may indicate that some of this criticism is unjustified. Number of joint efforts and the Exchange Relations Score were both used as dependent variables in this study, and were tested against each of the independent variables. The results of the hypotheses tests were identical. That is, the same six empirical hypotheses were accepted and the same four were not accepted when utilizing the Exchange Relations Score and the number of joint efforts as dependent variables. It was felt that the Exchange Relations Score was the "better" of the two measures of interorganizational relations because it was based on more information regarding the relationship between organizations and because of its deterministic nature.

However, in view of the findings of this study, it is suggested that the usefulness of "number of joint efforts" as an indicator of interorganizational relations may have been underestimated.

#### Suggestions for Future Research

Aldrich (1970) has pointed out that one implicit assumption underlying the study of interorganizational relations is that such relations are "good" in and of themselves. Higher performance, more efficient use of resources, and nonduplication of services are thought to be the primary benefits of interagency cooperation. Much research in interorganizational relations has been directed at attempting to explain the occurrence of these phenomena. However, research is needed to determine if interorganizational relations are as beneficial as they are assumed to be. Also needed are studies which specify interorganizational relations as the independent variable, and attempt to explain their results. Virtually all studies of interorganizational relations have utilized data collected at one point in time. Longitudinal studies are needed to reveal the presence or absence of changes in the organization's structure or functioning which may result from this type of interagency coordination.

More research is needed to better understand the participation of vertically-oriented organizations in interagency coordination. Measures focusing on the content of messages or programs initiated by higher administrative levels would be helpful. The role of goals or objectives in interagency interaction needs additional investigation. Emphasis should be placed on "real" goals, as differentiated from "stated" goals. Examination of more specific goals, such as those related to rural



development, for example, would be appropriate.

More emphasis on multi-variate relationships is needed to further the understanding of relations between organizations. Analysis of the relationship between the independent variables should be given attention. Path analysis techniques would be helpful when theoretically justified.

The present study and most others have examined interorganizational relations from the viewpoint of one organization; that is, the set organization was asked about its interaction with the focal organization. Differential perception of the extent of interaction on the part of agency directors is not taken into account. It could be that the focal organization director's perception of his relationship with the set organization differs considerably from the set organization director's perception of his interaction with the focal organization. Needed are methodological techniques which take into account the perception of both organizations. Also needed are studies which take into account which organization initiates the interaction.

This study adds support for the notion of a deterministic nature of interorganizational relations. However, more work needs to be done to indicate whether a single underlying dimension of interorganizational behavior indeed exists. Particularly needed are studies which extend this analysis to other empirical arenas, and those which cover a wider range of forms of interorganizational interaction. More work also is needed to better understand the usefulness of "joint efforts" as a single indicator of interorganizational behavior.

## CHAPTER 5. SUMMARY

Organizations have been a favorite topic of sociological research for many years. While most studies have emphasized intraorganizational behavior, a current trend is that of interorganizational relations, or relations between organizations. An empirical arena which offers possibilities for interorganizational research consists of those agencies engaged in rural development activities. The Cooperative Extension Service is one of the many public and private organizations in the rural development field. Given the proliferation and diversification of organizations engaged in development, it is assumed that organizations must relate their programs to those of other organizations and agencies if they are to succeed. Performance of these organizations--both individually and acting in concert--is necessary for effective development efforts to occur.

Extension attempts to perform a catalytic function--causing action by bringing together the people who have problems and the resources needed to solve these problems. Extension's ability to function depends partially on other organizations and agencies with which it may cooperate in development programs. Major emphasis of this study is to be placed on determining which organizations interact with Extension and also in tracing these interactions in an attempt to determine the extent of interaction and factors affecting the degree of interaction.

Formally stated, the objectives of this study are as follows:

1. To identify some of the organizations which constitute Extension's organization set.
2. To determine the level of interorganizational relations between

Extension and members of its organization set.

3. To determine factors which are associated with interorganizational activity between Extension and members of its organization set.

### Theoretical Formulations

Several theoretical perspectives which have proven useful in studying interorganizational relations were reviewed in this chapter. Drawing on these works, a theoretical framework was developed for the analysis of interorganizational relations between Extension and organizations with which it interacts at the county level. Extension was considered as the focal organization, with the organizations to which it relates being referred to as components of the organization set. Interaction between Extension and members of its organization set was defined as a system of exchanges. Organizations interact in order to acquire resources needed for goal attainment. Resources are scarce commodities, and few if any agencies have access to all the resources needed to achieve their goals. In these situations, organizations enter into exchanges in order to acquire the necessary resources. Obtaining resources through exchange transactions is subject to the norms of reciprocity. If Extension receives inputs from a second organization, it is expected to give something in return. What resources are given in return and when the transfer is to be made are not specified. This factor differentiates social exchange from economic exchange, in which benefits may have an exact price and payment by a certain date may be specified.

Organizations engaged in exchange transactions generally rely on input-output processes for realization of goal attainment. In order to

achieve their goals, organizations require inputs which they convert into outputs. The county Extension office requires certain inputs in order to function: cooperators, financial resources, staff skills and time. The anticipated outputs of the Extension office are educational programs. All the organizations in the study may be considered input organizations for Extension, and some may be seen as output organizations.

Thompson and McEwen's concepts of bargaining, cooptation and coalition provided a theoretical scheme from which the indicators of exchange relations used in this study were developed. These six items were thought to represent increasing levels of interorganizational exchange: (1) director acquaintance; (2) director interaction; (3) information exchange; (4) resource exchange; (5) overlapping boards; and (6) written agreements. Joint efforts was used as a separate indicator of exchange relations.

A number of variables thought to be related to interorganizational relations were discussed and stated in the form of general hypotheses. These hypotheses are listed below.

G. H. 1: The extent of domain consensus between a focal organization and a set organization is positively related to the intensity of exchange relations between these organizations.

G. H. 2: The extent of vertical orientation of a set organization is negatively related to the intensity of exchange relations between a focal organization and members of its organization set.

G. H. 3: The extent of similarity of goals between a focal organization and a set organization is positively related to the intensity of exchange relations between these organizations.

G. H. 4: The amount of prestige of a focal organization as perceived

by a set organization is positively related to the intensity of exchange relations between these organizations.

G. H. 5: The complexity of organizational structure of a set organization is positively related to the intensity of exchange relations between a focal organization and members of its organization set.

G. H. 6: The innovativeness of a set organization is positively related to the intensity of exchange relations between a focal organization and members of its organization set.

G. H. 7: The benefit of interaction as perceived by a set organization is positively related to the intensity of exchange relations between a focal organization and members of its organization set.

G. H. 8: A set organization's size of resource base is positively related to the intensity of exchange relations between a focal organization and members of its organization set.

The following three variables were selected as control variables in order to determine their influence on the previously-stated bi-variate hypotheses: domain consensus, membership in an interagency system, and goal similarity.

### Methods and Procedures

County based organizations which are engaged in development activities or have development-related programs constituted the empirical arena for evaluation of the hypotheses. The Extension office in each county was the focal agency. The fourteen agencies specified as members of Extension's organization set were: Soil Conservation Service, Agricultural Stabilization and Conservation Service, Farmers Home Administration, Forest Service,

rural electric cooperatives, Farm Bureau, ministerial associations, bankers associations, Social Welfare, Employment Service, Community Action Agencies, zoning commissions, industrial development organizations, and county conservation boards.

A purposive sample of 16 counties was selected, stratified on the basis of geographical location, population and population change, and level of poverty. The sample included some counties with urban growth centers and others that were primarily rural. The field study was conducted in August and September 1971. Field interviewing and a mailed questionnaire were used to gather the data. Respondents were the county Extension directors and the top administrators of the set organizations. The data was only part of a larger study designed to investigate organizational coordination in rural development.

#### Measurement and Description of the Dependent Variables

Two dependent variables were used in the study. The first, known as the Exchange Relations Score, consisted of component scores for six different possible areas of exchange relations. The Guttman scaling technique was used to construct a scale utilizing these six items. The second dependent variable was number of joint efforts between Extension and the set organizations. This item did not scale with the other six items. Because of its theoretical and practical importance, however, it was included as a second dependent variable to be tested against the independent variables in the study.

#### Hypothesis Evaluation Procedures

One or two empirical measures were developed for each of the eight independent variables. A total of ten two-variable empirical hypotheses

were generated. Product moment correlation coefficients were used to test the bi-variate empirical hypotheses. Partial correlation coefficients were used to test the relationships controlling for the effect of selected control variables. A .05 level of probability was considered as an indication of a statistically significant relationship.

### Findings

The first dependent variable considered in this study was a Guttman-type Exchange Relations Scale consisting of six components. The coefficient of reproducibility was .90; coefficient of scalability was .50; minimum marginal reproducibility was .80. On the basis of these and other considerations, it was concluded that the six scale items did constitute a deterministic scale of exchange relations. The scoring system used was to count the number of items which each respondent successfully passed. This score was known as the Exchange Relations Score. The mean Exchange Relations Score was 3.01.

The second dependent variable was the number of joint efforts between Extension and the set organizations. A mean score of 1.01 was found for the 88 organizations which reported joint efforts with Extension.

### Two variable analysis

Six of the ten empirical hypotheses were accepted when utilizing the Exchange Relations Score as the dependent variable. Six were accepted when utilizing the number of joint efforts as the dependent variable. The twelve supported empirical hypotheses provided support for six of the eight general hypotheses. A brief summary of each of the independent variables is as follows:

Domain consensus      It was concluded that domain consensus was positively related to interorganizational exchange. This relationship was significant when controlling for goal similarity, but not when controlling for membership in an interagency system. It was concluded that the relationship between domain consensus and interorganizational exchange depends on membership in an interagency system.

Extent of vertical orientation      It was concluded that the extent of vertical orientation was not negatively related to interorganizational exchange. A positive relationship was found between these variables, and this relationship was significant when controlling for goal similarity, domain consensus and membership in an interagency system. It was concluded that the relationship between extent of vertical orientation and interorganizational exchange is an independent relationship, and does not simply depend on the control variables.

Goal similarity      It was concluded that goal similarity was positively related to interorganizational exchange. This relationship was significant when controlling for domain consensus and membership in an interagency system. It was concluded that the relationship between goal similarity and interorganizational exchange is an independent relationship, and does not simply depend on the control variables.

Organizational prestige      It was concluded that organizational prestige was positively related to interorganizational exchange. This relationship was significant when controlling for domain consensus, membership in an interagency system, and goal similarity. It was concluded that the relationship between organizational prestige and interorganizational exchange is independent, and does not depend on the control variables.



Organizational complexity      It was concluded that complexity was positively related to interorganizational exchange. This relationship was significant when controlling for domain consensus, membership in an interagency system and goal similarity, but not when controlling for innovativeness. It was concluded that innovativeness acts as an intervening variable between complexity and interorganizational exchange.

Program innovation      It was concluded that innovativeness was positively related to interorganizational exchange. This relationship was significant when controlling for domain consensus, membership in an interagency system and goal similarity. It was concluded that the relationship between innovativeness and interorganizational exchange is an independent relationship, and does not simply depend on the control variables.

Perceived benefit of interaction      It was concluded that perceived benefit of interaction was positively related to interorganizational exchange. This relationship was significant when controlling for domain consensus, membership in an interagency system, and goal similarity. It was concluded that the relationship between perceived benefit of interaction and interorganizational exchange is an independent relationship, and does not simply depend on the control variables.

Size of resource base      It was concluded that the size of resource base was not significantly related to interorganizational exchange.

### Control variables

Domain consensus      Controlling for domain consensus did not significantly reduce the zero-order correlations between any of the independent variables and interorganizational exchange. It was concluded that the

relationship between the independent variables and interorganizational exchange did not simply depend on domain consensus.

Membership in an interagency system Controlling for membership in an interagency system as measured by membership in the Rural Development Committee reduced only one of the zero-order correlations below the significance level. It was concluded that the relationship between domain consensus and interorganizational exchange depends on membership in the Rural Development Committee.

Goal similarity Controlling for goal similarity did not significantly reduce the zero-order correlations between any of the independent variables and interorganizational exchange. It was concluded that the relationship between the independent variables and interorganizational exchange did not simply depend on domain consensus.

#### Additional findings

The same six empirical hypotheses were accepted and the same four were not accepted when utilizing the Exchange Relations Score and the number of joint efforts as dependent variables. Aiken and Hage (1968) have been criticized for their use of "joint efforts" as the sole indicator of interorganizational relations. In view of the findings of this study, however, it is suggested that the usefulness of "joint efforts" as an indicator of interorganizational relations may have been underestimated.

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